

MAIN OFFICE AND WORKS: 35 MESEROLE AVE., BROOKLYN, N. Y.

Special Notice and Trade Customs

All agreements are subject to strikes, accidents or causes beyond our control.

All quotations are for immediate acceptance only, unless otherwise agreed.

All claims for corrections or deductions must be presented within ten days after receipt of goods.

Boxing and cartage will be charged at cost. No goods insured unless so ordered.

All work is carefully laid out and inspected before delivery, and we are not responsible for any amount other than the price of the defective piece. Claims for labor expended will not be allowed under any circumstances. We will endeavor to correct any errors in the speediest and best possible manner.

We charge 10% for handling returned goods.

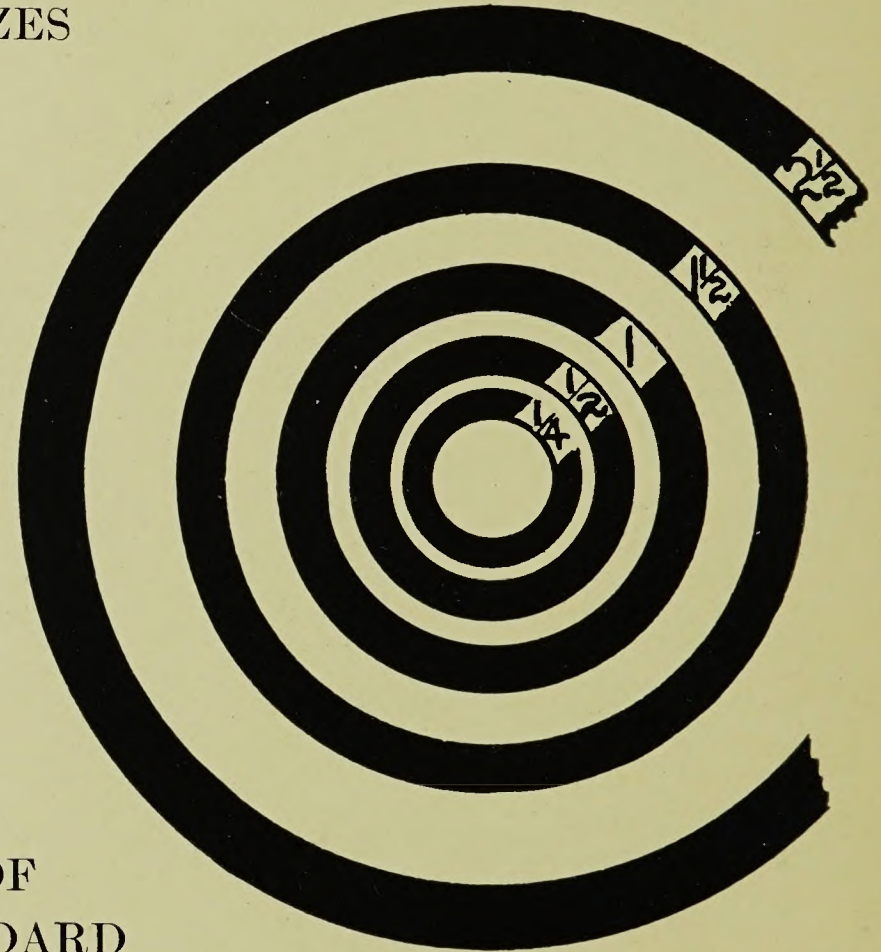
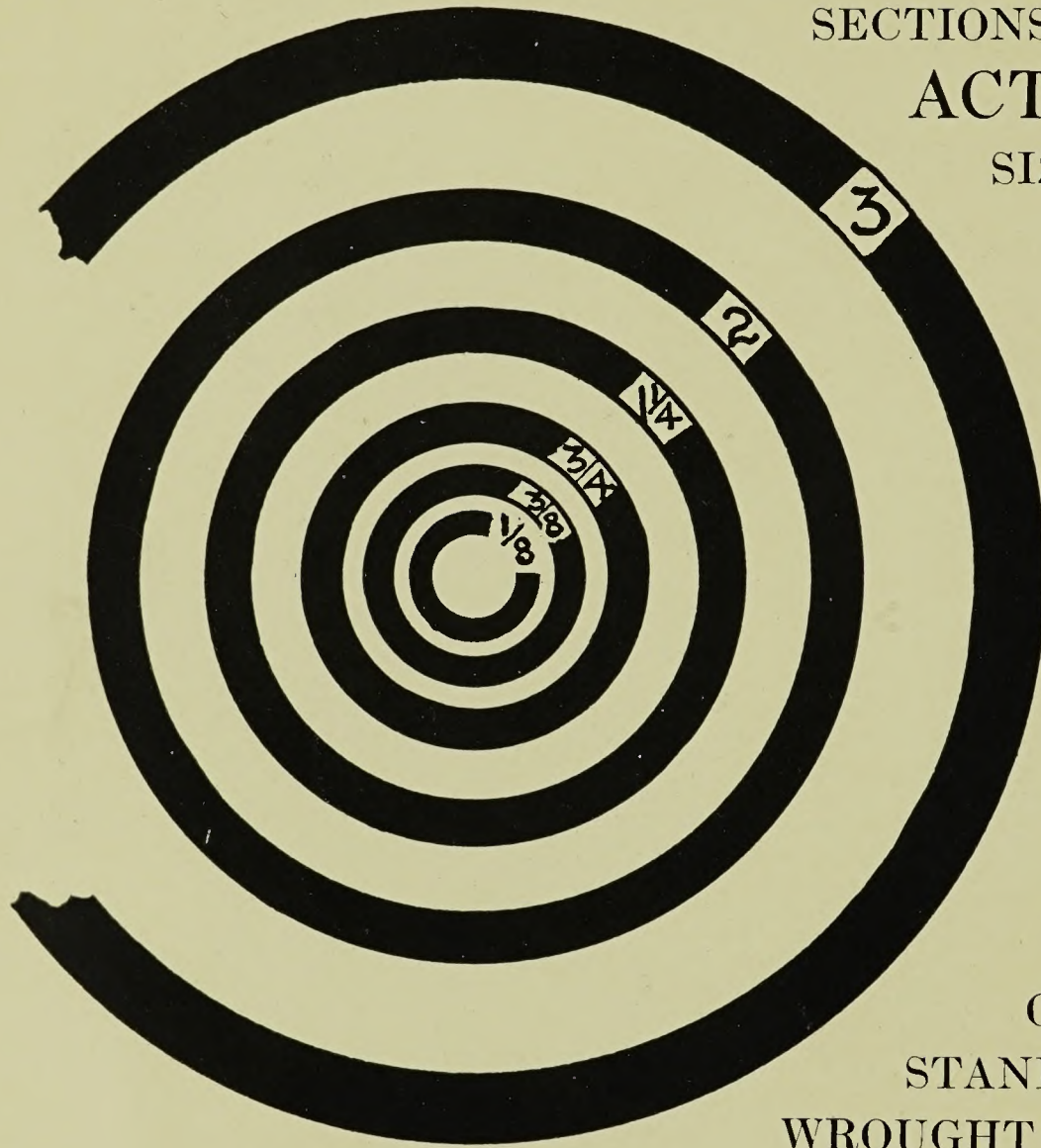


Yard, Storage Shed and Pattern Shop



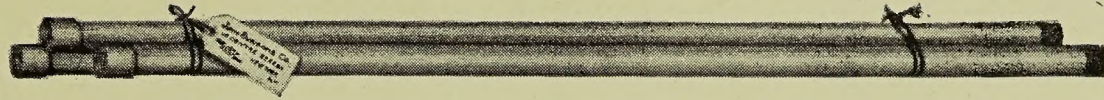
Main Building. Floor Space, 47,500 Square Feet

SECTIONS SHOWING
ACTUAL
SIZES



OF
STANDARD
WROUGHT IRON PIPE

Iron Pipe

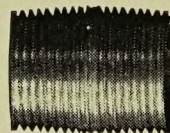


We carry Iron Pipe in stock as shipped from the mills in bundles, or lengths, and give general information relating to same, viz.:

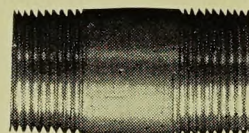
Nominal size Pipe	$\frac{1}{8}$ "	$\frac{1}{4}$ "	$\frac{3}{8}$ "	$\frac{1}{2}$ "	$\frac{3}{4}$ "	1"	$1\frac{1}{4}$ "	$1\frac{1}{2}$ "	2"	$2\frac{1}{2}$ "	3"	$3\frac{1}{2}$ "	4"	$4\frac{1}{2}$ "	5"	6"
Actual inside diam.	.27	.36	.49	.62	.82	1.04	1.38	1.61	2.06	2.46	3.06	3.56	4.02	4.50	5.04	6.06
" outside "	.40	.54	.67	.84	1.05	1.31	1.66	1.90	2.37	2.87	3.50	4.00	4.50	5.00	5.56	6.62
Approx. outside	$\frac{3}{8} +$	$\frac{9}{16} -$	$\frac{11}{16} -$	$\frac{7}{8} -$	$1\frac{1}{16} -$	$1\frac{5}{16}$	$1\frac{11}{16} -$	$1\frac{15}{16} -$	$2\frac{3}{8}$	$2\frac{7}{8}$	$3\frac{1}{2}$	4	$4\frac{1}{2}$	5	$5\frac{9}{16}$	$6\frac{5}{8}$
Weight per foot	.24	.42	.56	.84	1.12	1.67	2.24	2.68	3.61	5.74	7.54	9.00	10.66	12.34	14.50	18.76
List price per ft. } Black or Galv.	\$.05 $\frac{1}{2}$	\$.06	\$.06	\$.08 $\frac{1}{2}$	\$.11 $\frac{1}{2}$	\$.17	\$.23	\$.27 $\frac{1}{2}$	\$.37	\$.58 $\frac{1}{2}$	\$.76 $\frac{1}{2}$	\$.92	\$ 1.09	\$ 1.27	\$ 1.48	\$ 1.92
Cuts with Thread	.06	.06	.06	.06	.06	.06	.08	.10	.14	.20	.30	.40	.40	.50	.60	.80
" no Thread	.04	.04	.04	.04	.04	.04	.06	.08	.10	.14	.20	.27	.27	.34	.40	.54
Coupling, Black	.05	.05	.06	.07	.10	.13	.17	.21	.28	.40	.60	.80	1.00	1.50	1.65	2.40
" Galv.	.06	.06	.08	.10	.13	.18	.25	.32	.40	.55	.80	1.05	1.40	2.00	2.25	3.25

Unless otherwise ordered, random lengths, threaded both ends and with one Coupling, will be shipped.
Galvanized Pipe will be charged at an advanced price over black.

Iron Pipe Nipples



Close



Short



Long

Lengths, inches			Size of Pipe inches!	Black, Right-hand Th'ds					Black, Right and Left					Galvanized, Right				
Close	Short	Long		Close or Short	Long	4" long	5" long	6" long	Close or Short	Long	4" long	5" long	6" long	Close or Short	Long	4" long	5" long	6" long
up to	up to	up to																
$\frac{3}{4}$	$1\frac{1}{2}$	$3\frac{1}{2}$	$\frac{1}{8}$	\$.04	\$.06	\$.07	\$.08	\$.10	\$.05	\$.08	\$.09	\$.11	\$.13	\$.06	\$.11	\$.12	\$.15	\$.17
$\frac{7}{8}$	$1\frac{1}{2}$	$3\frac{1}{2}$	$\frac{1}{4}$	.04	.06	.07	.08	.10	.05	.08	.09	.11	.13	.06	.11	.12	.15	.17
1	$1\frac{1}{2}$	$3\frac{1}{2}$	$\frac{3}{8}$	.04	.06	.07	.08	.10	.05	.08	.09	.11	.13	.06	.11	.12	.15	.17
$1\frac{1}{8}$	$1\frac{1}{2}$	$3\frac{1}{2}$	$\frac{1}{2}$	.05	.07	.08	.10	.12	.07	.10	.11	.13	.16	.06	.11	.13	.16	.18
$1\frac{3}{8}$	2	4	$\frac{3}{4}$	.06	.09		.11	.13	.08	.12		.15	.17	.08	.14		.18	.21
$1\frac{1}{2}$	2	4	1	.08	.13		.15	.18	.11	.18		.20	.24	.11	.19		.24	.28
$1\frac{5}{8}$	$2\frac{1}{2}$	$4\frac{1}{2}$	$1\frac{1}{4}$	.11	.17		.20	.24	.15	.23		.27	.32	.17	.29		.32	.38
$1\frac{3}{4}$	$2\frac{1}{2}$	$4\frac{1}{2}$	$1\frac{1}{2}$	.13	.20		.25	.29	.18	.27		.34	.39	.21	.35		.39	.46
2	$2\frac{1}{2}$	$4\frac{1}{2}$	2	.18	.27		.32	.38	.24	.36		.43	.51	.27	.47		.52	.61
$2\frac{1}{2}$	3	5	$2\frac{1}{2}$	.39	.59			.68	.52	.79			.91	.56	.86			1.00
$2\frac{5}{8}$	3	5	3	.48	.72			.85	.65	.96			1.13	.70	1.10			1.30
$2\frac{3}{4}$	4	6	$3\frac{1}{2}$	.75	1.05				1.00	1.40				1.20	1.70			
$2\frac{7}{8}$	4	6	4	.85	1.20				1.15	1.60				1.35	1.87			

For Galvanized Right and Left Nipples add 60% to list of R. and L. Black.
Longer Nipples (than 6 inches) are charged as Pipe and Threads, see page 5.

Wrought Iron Columns

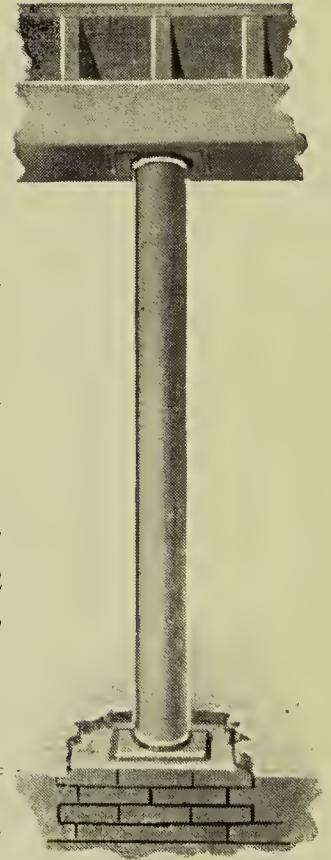
Cheaper than brick Piers and taking up only one-tenth as much room.
Special flanges to order at short notice.

Table of Safe Loads in Tons of 2,000 Lbs. Ends of Column Fixed. Factor of Safety

Length of Column in Feet.	Standard Pipe										Extra Heavy Pipe								
	2"	2½"	3"	3½"	4"	4½"	5"	6"	7"	8"	3"	3½"	4"	4½"	5"	6"	7"	8"	
8	2.0	3.35	..	..	..	..	...	...	...	...	5.7	6.8	8.85	9.85	10.8	15.	17.85	20.71
10	1.8	3.35	4.08	6.07	7.67	9.32	10.53	14.06	...	...	5.17	6.29	8.2	9.2	10.2	14.57	17.35	20.2
12	1.4	2.8	4.3	5.52	7.1	8.69	9.93	13.82	18.58	23.13	4.6	5.57	7.57	8.42	9.58	13.82	16.82	19.8	
14		2.4	3.8	5.1	6.56	8.16	9.33	13.50	17.9	22.45	4.1	5.1	6.78	7.7	9.	13.	16.17	19.17	
16		2.01	3.36	4.47	6.02	7.52	8.6	13.03	17.2	21.7	3.57	4.6	6.14	7.1	8.15	12.5	15.43	18.52	
18			3.08	4.02	5.44	6.98	8.6	12.37	16.5	20.85	3.2	4.	5.57	6.57	7.42	11.78	14.78	17.78	
20							8.0	11.75	15.76	20.11	2.85	3.6	5.	6.	6.85	11.1	14.1	17.	

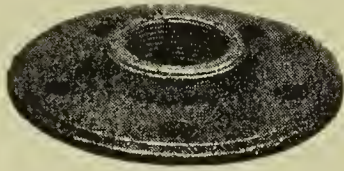
Prices of Plain Square Column Flanges (no Threads)

Size Pipe	1¼"	1½"	2"	2½"	3"	4"	5"	6"	8"
" Plate	4 x 4	4 x 4	4 x 4	5 x 5	5 x 6½	6 x 8	7¼ x 9½	8½ x 10½	11½ x 11½
Price	\$.07	\$.09	\$.12	\$.16	\$.23	\$.36	\$.61	\$.88	\$1.71



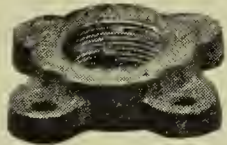
Railing Flanges: Cast Iron

Drilled Floor Flange

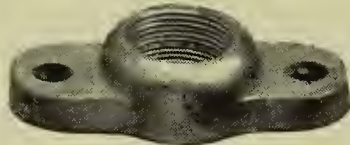


Countersunk holes for
wood screws

Square Rail Flange



Oval Flange



I. P. Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Diameter 2 1/2	\$.08	\$.08	\$.10	\$.10	..	..	..	..
" 3	.10	.10	.10	.12	\$.14	..	..	..
" 3 1/2	..	.15	.15	.15	.15	\$.16	..	..
" 4	..	.22	.22	.22	.16	.16	\$.18	..
" 4 1/2	..	..	.25	.25	.25	.25	.22	..
" 5	..	..	.35	.30	.30	.30	.30	\$.35
" 5 1/2	..	..	..	..	.40	.40	.40	.35
" 6	..	..	..	..	.42	.40	.40	.42
" 6 1/2	..	..	..	..	..	.60	.55	.50

I. P. Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
Square each	\$.14	\$.15	\$.15	\$.20	\$.28	\$.30	\$.50	\$.75

I. P. Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
Oval each	\$.14	\$.18	\$.22	\$.24	\$.31	\$.44	\$.60	\$.80

Plain Cast Iron Flanges



Size, inches	$\frac{3}{8}$ "	$\frac{1}{2}$ "	$\frac{3}{4}$ "	1"	$1\frac{1}{4}$ "	$1\frac{1}{2}$ "	2"	$2\frac{1}{2}$ "	3"	$3\frac{1}{2}$ "	4"	$4\frac{1}{2}$ "	5"	6"
Diam. 3	\$.10	\$.10	..	..	..	..	..	..	..	..	..	..	..	..
" 3 $\frac{1}{2}$	.15	.15	\$.15	\$.15	\$.16	..	..	..	..	..	..	..	..	..
" 4	.22	.22	.22	.16	.16	..	..	..	..	..	..	..	..	..
" 4 $\frac{1}{2}$	.25	.25	.25	.25	.25	\$.22	..	..	..	..	..	..	..	..
" 5	.35	.35	.30	.30	.30	.30	\$.35	..	..	..	..	..	..	..
" 5 $\frac{1}{2}$	.45	.45	.45	.40	.40	.40	.35	\$.40	..	..	..	..	..	..
" 6	.50	.50	.50	.42	.40	.40	.42	.42	\$.50	..	..	..	..	..
" 6 $\frac{1}{2}$	..	.65	.60	.60	.60	.55	.50	.50	.50	\$.65	..	..	..	..
" 7	..	.75	.75	.75	.70	.70	.62	.62	.62	.75	..	..	..	..
" 7 $\frac{1}{2}$	..	.90	.90	.90	.85	.85	.80	.80	.75	.85	\$.90	..	..	..
" 8	..	1.00	1.00	1.00	.95	.95	.90	.90	.90	.90	.90	..	..	..
" 8 $\frac{1}{2}$	..	1.25	1.25	1.25	1.15	1.15	1.10	1.10	1.10	1.00	1.00	..	..	..
" 9	..	..	..	1.35	1.35	1.35	1.30	1.25	1.15	1.15	1.15	\$1.15	\$1.40	..
" 9 $\frac{1}{2}$	..	..	..	..	1.90	1.90	1.75	1.75	1.60	1.60	1.50	1.25	1.50	\$1.50
" 10	..	..	..	..	2.25	2.25	2.15	2.00	1.80	1.50	1.50	1.50	1.50	1.50
" 11	..	..	..	..	..	..	2.50	2.50	2.25	2.25	2.00	1.75	1.75	1.75
" 12	..	..	..	..	..	..	..	3.00	3.00	2.75	2.50	2.50	2.20	2.20
" 13	..	..	..	..	..	..	..	..	3.50	3.50	3.25	3.00	3.00	2.80
" 14	..	..	..	..	..	..	..	..	4.00	4.00	3.75	3.75	3.50	3.25

Heavy Rail Flange



For description see page 40.

We carry this flange in stock in sizes 1 x 4— $1\frac{1}{4}$ x $5\frac{1}{2}$, $1\frac{1}{2}$ x $5\frac{1}{2}$ —2 x 6— $2\frac{1}{2}$ x 7, and 3 x 8, and list prices are same as above.

Malleable Iron Rail Fittings



I. P. Size, inches	$\frac{1}{2}$ "	$\frac{3}{4}$ "	1"	$1\frac{1}{4}$ "	$1\frac{1}{2}$ "	2"	$2\frac{1}{2}$ "	3"
Elbow	\$.15	\$.18	\$.20	\$.35	\$.45	\$.72	\$1.60	\$2.25
" Side Outlet	.20	.23	.25	.40	.50	.80	1.75	2.50
Tee	.20	.23	.25	.40	.50	.75	1.75	2.50
" Side Outlet	.30	.33	.35	.45	.55	.90	1.90	2.60
Cross	.30	.33	.35	.45	.58	1.00	1.80	2.60
" Side Outlet	.35	.38	.40	.50	.65	1.35	2.00	2.75
Acorn Ornament	.16	.18	.20	.25	.35	.90	1.25	1.75

In order to make up a 2 or 3 pipe rail it is necessary to cut *left*-hand threads on one side of every panel. Unless otherwise instructed we ship all Railing Fittings threaded right-hand.

For Floor Flanges of all styles, see pages 8 and 9.

Reducing Sizes of Railing Fittings

We make reducing Railing Fittings for the construction of Rails of *different* sizes of Pipe, and furnish a complete line as follows:

Size of Posts	1"	1"	$1\frac{1}{4}$ "	$1\frac{1}{4}$ "	$1\frac{1}{2}$ "	$1\frac{1}{2}$ "	2"	2"	$2\frac{1}{2}$ "	$2\frac{1}{2}$ "	3"	3"
" " Horizontals	$\frac{1}{2}$ "	$\frac{3}{4}$ "	$\frac{3}{4}$ "	1"	1"	$1\frac{1}{4}$ "	$1\frac{1}{4}$ "	$1\frac{1}{2}$ "	$1\frac{1}{2}$ "	2"	2"	$2\frac{1}{2}$ "

For prices take list of Straight Fittings corresponding to largest outlet of Reducing Fitting and add 15%.

45° Angle Stair Rail Fittings

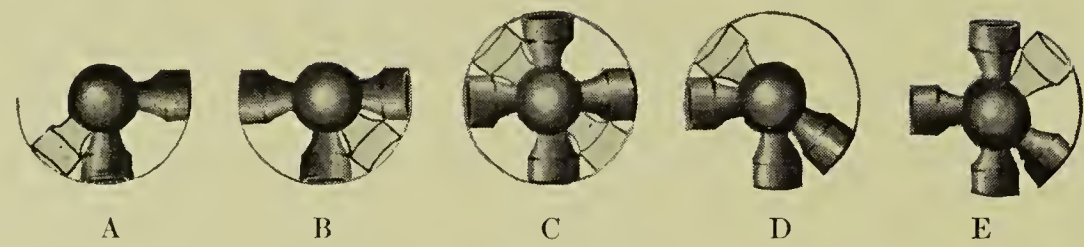


For Stairways to Engine Platforms and Galleries; fittings of this type for other angles to order from our adjustable Patterns at special prices.

		Sizes	1"	1¼"	1½"	2"	2½"	3"
Ells		45°	\$.40	\$.70	\$.90	\$1.44	\$2.00	\$3.00
"	S. O.	45°	.50	.80	1.00	1.60	2.30	3.40
Tee		45°	.50	.80	1.00	1.60	2.40	3.80
"	S. O.	45°*	.70	.90	1.10	1.80	2.80	4.30
Cross		45°	.70	.90	1.16	2.00	3.00	4.50
"	S. O.	45°	.80	1.00	1.30	2.70	3.50	5.20
Flange		45°	.50	.80	1.00	1.60	2.40	3.80

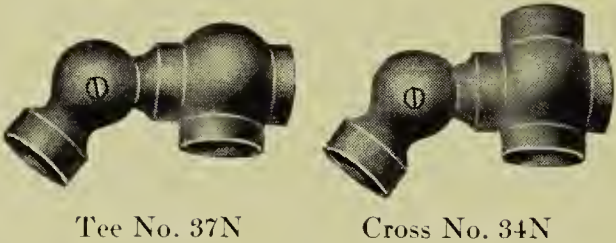
* In ordering Side Outlet Tees it is necessary to show on which side the Side Outlet is desired, as these are not reversible.

Adjustable Railing Fittings



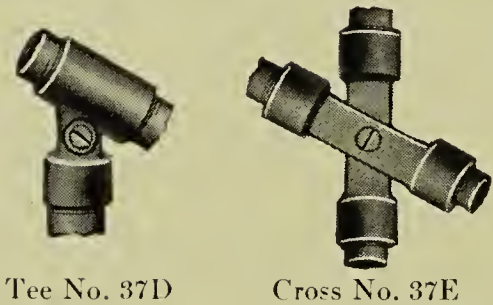
I. P. Size	1"	1¼"	1½"	2"
A	\$1.10	\$1.25	\$1.70	\$2.25
B	1.30	1.50	2.00	2.50
C	1.50	1.75	2.35	2.75
D	1.30	1.60	2.15	2.50
E	1.50	1.85	2.50	2.75

Stair Landing Fittings



I. P. Size	1"	1¼"	1½"	2"
Tee No. 37N	\$.90	\$1.10	\$1.50	\$2.15
Cross No. 34N	1.00	1.20	1.60	2.40

Stair Rail Fittings



I. P. Size	¾"	1"	1¼"	1½"
Tee No. 37D	\$.45	\$.65	\$1.00	\$1.15
Cross No. 37E	.65	.80	1.20	1.35

Special Rail Fittings



Discomforters or Loafer Cushions
In 30" lengths drilled for flat-head
Screws. Price 15 cents per foot



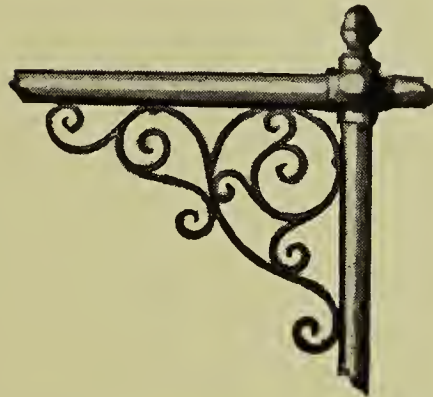
Ornamental Coupling
for using up short
pieces of Pipe



Hand Rail End
drives into Pipe



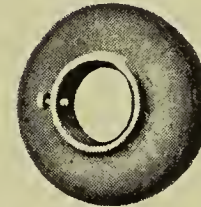
Stair Rail End
drives into fitting



Scroll ornament drilled for
Screws
Malleable Iron, each 50 cents



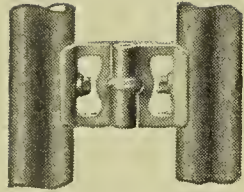
Rosette Plate



Plain Ceiling or
Wall Plate

I. P. Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
Ornament'l Coup'ng	\$.25	\$.40	...	...	...	...
Hand Rail End,40	\$.50	\$.75	...	...
Stair Rail End,80	1.00	1.75	2.00	...	...
Rosette Plate,18	.20	.30	.40	...	...
Plain Ceiling Plate	\$.11	\$.13	.16	.18	.23	.27	\$.36	\$.50

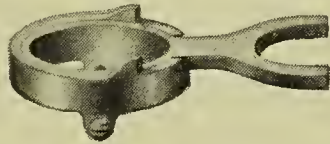
Gates for Pipe Railings



Gate Hinge

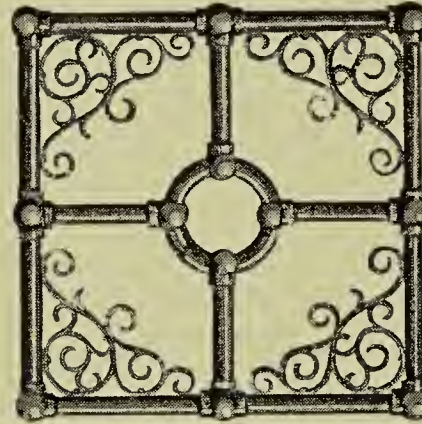
To fit all sizes of Gates; attached
to Pipe with one Bolt
to each leg.

Each, nct - - \$1.00



Self-closing Gate Latch

1"	-	-	-	-	\$.70
1 1/4"	-	-	-	-	.80
1 1/2"	-	-	-	-	.90
2"	-	-	-	-	1.00



Ornamental Gate

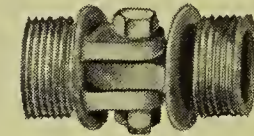
With Gate Centre Piece and Scroll Ornaments

Gate Centre Pieces, Malleable Iron

1"	each	-	-	-	-	-	-	-	\$1.00
1 1/4"	"	-	-	-	-	-	-	-	1.50



Self-closing Hinges same
list as Plug Hinges

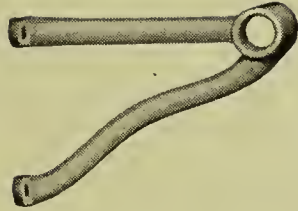


Plug Hinges

1/2"	-	-	-	-	\$.35
3/4"	-	-	-	-	.40
1"	-	-	-	-	.45
1 1/4"	-	-	-	-	.55
1 1/2"	-	-	-	-	.80
2"	-	-	-	-	1.00

Foot Rail Brackets

For Counter, Bar and Workbench Foot Rails



No. 1



No. 3



No. 13



No. 14



No. 10

For pipe	½"	¾"	1"	1¼"	1½"	2"
Bracket No. 1 Black	\$.40	\$.50	\$.70	\$.80	\$1.00	\$1.25
“ No. 3 “	.40	.40	.50	.60	.90	1.15
“ No. 13 } “ No. 14 } (for 1" Pipe only)			Black { \$.11 .12	Galvanized { \$.17 .20		
Drive Cap No. 10 Black	.15	.15	.20	.25	.30	.40

Malleable Iron Fittings

These are sold by weight, and as a complete list of sizes would be too voluminous for this book we submit a Price List for Estimating purposes, to cover the most frequent sizes used in Rail and Construction work. Malleable Fittings will be charged according to weight and classification adapted by the Manufacturers Nov. 4, 1901, unless otherwise agreed.

Price per 100 Pieces



Plain Ell



Beaded Ell

Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.
$\frac{1}{8}$	\$3.10	\$3.90	$1\frac{1}{4} \times 1$	\$10.20	\$16.15	$2\frac{1}{2}$	\$43.80	\$69.35
$\frac{1}{4}$	2.50	3.50	$1\frac{1}{4}$	12.15	19.25	3×2	47.40	75.05
$\frac{3}{8}$	3.90	5.45	$1\frac{1}{2} \times 1$	12.75	20.15	$3 \times 2\frac{1}{2}$	58.55	92.70
$\frac{1}{2}$	4.80	6.70	$1\frac{1}{2} \times 1\frac{1}{4}$	14.75	23.40	3	76.20	120.65
$\frac{3}{4} \times \frac{1}{2}$	7.15	10.00	$1\frac{1}{2}$	16.15	25.55	$3\frac{1}{2} \times 3$	94.80	150.10
$\frac{3}{4}$	4.40	6.95	$2 \times 1\frac{1}{4}$	21.60	34.20	$3\frac{1}{2}$	100.80	159.60
$1 \times \frac{1}{2}$	9.10	12.75	$2 \times 1\frac{1}{2}$	22.50	35.65	4×3	120.00	190.00
$1 \times \frac{3}{4}$	5.95	9.40	2	25.80	40.85	$4 \times 3\frac{1}{2}$	135.00	213.75
1	7.00	11.10	$2\frac{1}{2} \times 1\frac{1}{2}$	30.00	47.50	4	138.00	218.50
$1\frac{1}{4} \times \frac{3}{4}$	9.00	14.25	$2\frac{1}{2} \times 2$	40.80	64.60			



Ell 45°



Street Elbow



Ell, Side Outlet



Tee, Side Outlet

Malleable Fittings—Continued

Price per 100 Pieces

Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.
$\frac{1}{2}$	\$4.25	\$5.95	$1\frac{1}{4}$	\$16.30	\$22.85	$2\frac{1}{2}$	\$34.80	\$55.10
$\frac{3}{4}$	6.85	9.60	$1\frac{1}{2}$	21.80	30.55	3	55.80	88.35
1	9.45	13.25	2	37.60	52.65	$3\frac{1}{2}$	75.00	118.75
						4	96.00	152.00

Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.
$\frac{1}{4}$	\$2.15	\$3.05	$\frac{3}{4}$	\$7.50	\$10.50	$1\frac{1}{2}$	\$16.45	\$26.05
$\frac{3}{8}$	3.55	5.00	1	8.15	12.95	2	28.80	45.60
$\frac{1}{2}$	5.65	7.95	$1\frac{1}{4}$	12.50	19.80			

Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.
$\frac{3}{8}$	\$5.00	\$7.00	$\frac{3}{4}$	\$8.50	\$11.90	$1\frac{1}{4}$	\$23.20	\$32.50
$\frac{1}{2}$	6.25	8.75	1	13.20	18.50	$1\frac{1}{2}$	31.60	44.25
						2	52.00	72.80

Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.
$\frac{1}{2}$	\$6.60	\$9.25	1	\$15.20	\$21.30	$1\frac{1}{2}$	\$32.50	\$45.50
$\frac{3}{4}$	9.95	13.95	$1\frac{1}{4}$	26.15	36.60	2	56.00	78.40

Malleable Fittings

(Continued)



Beaded

Plain

TEE

Price per 100 Pieces

In describing Tees name run first, and then the outlet thus:

$$1'' \text{T}^{\frac{3}{4}''}_{\frac{1}{2}''} = 1 \times \frac{3}{4} \times \frac{1}{2}'' \text{ or } \frac{3}{4}'' \text{T}^{\frac{3}{4}''}_{1''} = \frac{3}{4} \times 1''$$

Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.
$\frac{1}{8}$	\$4.10	\$5.15	$1\frac{1}{4}$	\$15.80	\$25.00	$2\frac{1}{2}$	\$52.60	\$83.25
$\frac{1}{4}$	2.90	4.10	$1\frac{1}{4} \times 1\frac{1}{2}$	16.95	26.85	$2\frac{1}{2} \times 3$	81.00	128.25
$\frac{3}{8}$	4.35	6.10	$1\frac{1}{4} \times 2$	22.45	35.55	$3 \times 1\frac{1}{2}$	67.20	106.40
$\frac{1}{2}$	6.35	8.90	$1\frac{1}{2} \times 1$	15.95	25.30	3×2	69.00	109.25
$\frac{3}{4} \times \frac{1}{2}$	8.45	11.85	$1\frac{1}{2} \times 1\frac{1}{4}$	18.15	28.75	$3 \times 2\frac{1}{2}$	72.00	114.00
$\frac{3}{4}$	5.85	9.25	$1\frac{1}{2}$	20.05	31.75	3	90.00	142.50
$\frac{3}{4} \times 1$	7.25	11.50	$1\frac{1}{2} \times 2$	24.40	38.60	$3\frac{1}{2} \times 2\frac{1}{2}$	132.00	209.00
$1 \times \frac{1}{2}$	11.40	15.95	2×1	23.90	37.85	$3\frac{1}{2} \times 3$	136.20	215.65
$1 \times \frac{3}{4}$	7.40	11.70	$2 \times 1\frac{1}{4}$	26.40	41.80	$3\frac{1}{2}$	126.00	199.50
1	8.80	13.90	$2 \times 1\frac{1}{2}$	28.95	45.80	$4 \times 2\frac{1}{2}$	112.80	178.60
$1 \times 1\frac{1}{4}$	11.55	18.25	2	33.15	52.45	4×3	132.00	209.00
$1 \times 1\frac{1}{2}$	12.25	19.40	$2 \times 2\frac{1}{2}$	45.60	72.20	$4 \times 3\frac{1}{2}$	147.00	232.75
$1\frac{1}{4} \times \frac{3}{4}$	11.90	18.85	$2\frac{1}{2} \times 1\frac{1}{2}$	45.00	71.25	4	150.00	237.50
$1\frac{1}{4} \times 1$	14.10	22.35	$2\frac{1}{2} \times 2$	49.20	77.90			

Malleable Fittings—Continued

Price per 100 Pieces



Cross

Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.
$\frac{1}{4}$	\$3.45	\$4.85	$1\frac{1}{4} \times 1$	\$15.40	\$24.35	$2\frac{1}{2} \times 1\frac{1}{2}$	\$45.00	\$70.00
$\frac{3}{8}$	5.10	7.15	$1\frac{1}{4}$	18.15	28.70	$2\frac{1}{2} \times 2$	50.00	78.00
$\frac{1}{2}$	8.00	11.20	$1\frac{1}{2} \times 1$	18.25	28.90	$2\frac{1}{2}$	69.60	110.20
$\frac{3}{4} \times 1\frac{1}{2}$	9.50	13.30	$1\frac{1}{2} \times 1\frac{1}{4}$	21.40	33.85	$3 \times 1\frac{1}{2}$	70.00	108.00
$\frac{3}{4}$	12.30	17.25	$1\frac{1}{2}$	22.80	36.10	3×2	81.25	128.65
$1 \times 1\frac{1}{2}$	10.40	14.55	2×1	24.95	39.55	$3 \times 2\frac{1}{2}$	95.90	151.80
$1 \times \frac{3}{4}$	14.60	20.45	$2 \times 1\frac{1}{4}$	29.05	46.00	3	111.25	176.15
1	14.80	25.80	$2 \times 1\frac{1}{2}$	31.20	49.40	$3\frac{1}{2}$	141.00	223.25
$1\frac{1}{4} \times \frac{3}{4}$	12.25	19.40	2	41.20	65.20	4	191.75	203.65



Drop Ell

Size, Ins.	Black	Galv.
$\frac{1}{4}$	\$2.90	\$4.10
$\frac{3}{8}$	4.20	5.90
$\frac{1}{2}$	5.75	8.05
$\frac{3}{4}$	8.40	11.80
1	12.50	17.50



Drop Tee

Size, Ins.	Black	Galv.
$\frac{3}{8}$	\$4.50	\$6.30
$\frac{1}{2}$	6.70	9.40
$\frac{3}{4}$	10.10	14.15
1	14.80	20.75

Malleable Fittings—Continued

Price per 100 Pieces



Beaded



Plain
REDUCERS



Y BRANCHES



CAP

Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.
$\frac{3}{4}$ x $\frac{3}{8}$	\$4.60	\$6.45	$1\frac{1}{2}$ x $1\frac{1}{4}$	\$10.35	\$16.40	3 x 2	\$39.00	\$61.75
$\frac{3}{4}$ x $\frac{1}{2}$	4.95	6.95	2 x 1	13.70	21.65	3 x $2\frac{1}{2}$	42.00	66.50
1 x $\frac{1}{2}$	7.00	9.80	2 x $1\frac{1}{4}$	14.15	22.45	$3\frac{1}{2}$ x $2\frac{1}{2}$	55.00	80.00
1 x $\frac{3}{4}$	7.60	10.65	2 x $1\frac{1}{2}$	17.30	27.35	$3\frac{1}{2}$ x 3	58.00	88.00
$1\frac{1}{4}$ x $\frac{3}{4}$	7.30	11.55	$2\frac{1}{2}$ x $1\frac{1}{4}$	21.85	34.60	4 x 2	64.80	102.60
$1\frac{1}{4}$ x 1	7.75	12.25	$2\frac{1}{2}$ x $1\frac{1}{2}$	24.00	38.00	4 x $2\frac{1}{2}$	70.20	111.15
$1\frac{1}{2}$ x $\frac{3}{4}$	8.70	13.75	$2\frac{1}{2}$ x 2	25.00	39.55	4 x 3	75.60	119.70
$1\frac{1}{2}$ x 1	9.15	14.50	3 x $1\frac{1}{2}$	35.40	56.05	4 x $3\frac{1}{2}$	80.00	129.00

Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.
1	\$22.00	\$34.00	2	\$74.00	\$103.60
$1\frac{1}{4}$	35.00	49.00	3	130.00	170.00
$1\frac{1}{2}$	48.00	67.20			

Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.
$\frac{1}{4}$	\$1.30	\$1.85	1	\$6.60	\$9.25	$2\frac{1}{2}$	\$24.75	\$39.15
$\frac{3}{8}$	1.95	2.75	$1\frac{1}{4}$	7.20	11.40	3	34.20	54.15
$\frac{1}{2}$	2.95	4.15	$1\frac{1}{2}$	9.15	14.45	$3\frac{1}{2}$	46.80	74.10
$\frac{3}{4}$	4.30	6.05	2	15.15	23.95	4	58.80	93.10



Locknut



Wastenut



Wrought
Couplings



Malleable Iron
Right and Left
Thread Coupling

Malleable Fittings—Continued

Price per 100 Pieces

Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.
$\frac{1}{4}$	\$.90	\$1.30	1	\$3.75	\$5.25	$2\frac{1}{2}$	\$16.00	\$25.30
$\frac{3}{8}$	1.45	2.05	$1\frac{1}{4}$	5.20	7.30	3	22.30	35.25
$\frac{1}{2}$	1.55	2.20	$1\frac{1}{2}$	4.50	7.00	$3\frac{1}{2}$	26.65	42.20
$\frac{3}{4}$	2.05	2.90	2	5.55	8.75	4	36.50	57.80

Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.
$\frac{1}{4}$	\$1.10	\$1.55	$\frac{1}{2}$	\$2.55	\$3.60	1	\$4.40	\$6.20
$\frac{3}{8}$	1.85	2.60	$\frac{3}{4}$	3.80	5.35	$1\frac{1}{4}$	8.50	11.90

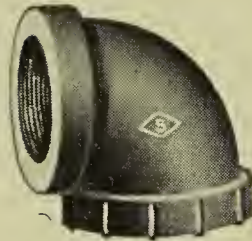
Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.
$\frac{1}{8}$	\$5.00	\$6.00	$\frac{1}{2}$	\$7.00	\$10.00	$1\frac{1}{4}$	\$17.00	\$25.00
$\frac{1}{4}$	5.00	6.00	$\frac{3}{4}$	10.00	13.00	$1\frac{1}{2}$	21.00	32.00
$\frac{3}{8}$	6.00	8.00	1	13.00	18.00	2	28.00	40.00

Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.	Size, Ins.	Black	Galv.
$\frac{1}{4}$	\$1.95	\$2.75	$\frac{3}{4}$	\$6.55	\$9.20	$1\frac{1}{2}$	\$12.10	\$19.15
$\frac{3}{8}$	3.20	4.50	1	6.00	9.45	2	19.30	30.55
$\frac{1}{2}$	3.90	5.50	$1\frac{1}{4}$	8.50	13.40	$2\frac{1}{2}$	31.20	49.40

Cast Iron Fittings



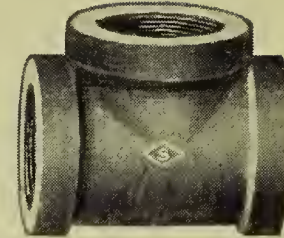
Ell



Ell, Right and Left



Ell, 45°



Tee

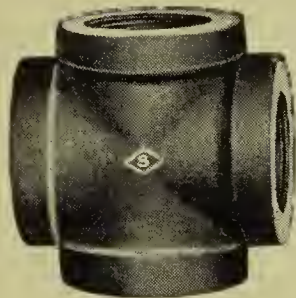


Tee, Reducing

	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	4 1/2"	5"	6"
Ell, Right	\$.06	\$.08	\$.10 1/2	\$.16	\$.20	\$.28	\$.50	\$.75	\$1.05	\$1.20	\$1.75	\$2.00	\$2.75
" Right & Left	.07	.09	.12	.18	.23	.32	.60	.85	1.20	1.50	2.25	2.40	3.40
" Reducing	.07	.09	.12	.18	.23	.32	.60	.85	1.20	1.40	2.00	2.30	3.15
" Side Outlet	.18	.24	.30	.48	.60	.84	1.50	2.25	3.15	3.60	5.25	6.00	8.25
" 45°	.07	.10	.12	.19	.24	.34	.60	.90	1.25	1.45	2.20	2.50	3.45
Tees	.09	.12	.15	.23	.29	.41	.73	1.10	1.50	1.75	2.55	3.00	4.00
" Reducing	.10	.14	.17	.27	.33	.47	.83	1.25	1.75	2.00	2.95	3.50	4.60
" Side Outlet	.27	.36	.45	.70	.90	1.25	2.25	3.25	4.50	5.25	7.65	9.00	12.00

Cast Iron Fittings

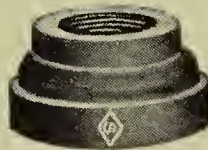
(Continued)



Cross



Y Branch



Reducer



Locknut



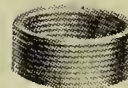
Plug



Cap



Bushing, Common



Bushing, Flush

	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	4 1/2"	5"	6"
Cross	\$.16	\$.22	\$.27	\$.42	\$.53	\$.75	\$1.30	\$2.00	\$2.70	\$3.15	\$4.60	\$5.50	\$7.25
“ Reducing	.18	.25	.30	.46	.60	.83	1.45	2.20	3.00	3.50	5.10	6.00	8.00
Y Branch	.20	.28	.34	.54	.66	.94	1.66	2.50	3.50	4.00	5.90	7.00	9.20
Reducing Y Branch	.23	.33	.40	.62	.76	1.08	1.90	2.90	4.00	4.60	6.80	8.00	10.60
Cap	..	..	.08	.14	.20	.26	.40	.54	.75	.87	1.05	1.20	1.55
Reducers	..	..	..	..	..	.43	.60	.80	1.00	1.35	1.85	2.00	2.70
Locknuts	..	..	.08	.10	.12	.25	.27	.34	.47	.64	.85	.90	1.30
Plugs	.02	.03	.04	.05	.07	.10	.18	.25	.38	.42	.65	.88	1.20
Bushings, Common	.04	.05	.06	.07	.09	.14	.21	.30	.40	.50	.75	.93	1.25
“ Flush	.09	.11	.13	.17	.22	.32	.48	.70	1.20	1.50	2.10	2.60	3.75

Awning Fittings, Malleable Iron

These are used in making up Awning Frames, Tents, Canopies, etc., etc., and are all tapped for $\frac{3}{8}$ inch Iron Pipe or $\frac{5}{8}$ inch Iron Rod, except where otherwise mentioned.

	Black	Galv.		Black	Galv.		Black	Galv.
No. 21 per doz.	\$.60	\$.66	No. 14	\$.46	\$.50	No. 16 x $1\frac{1}{2}$ "	\$.38	\$.42
" 11 "	.68	.74	" 7	.54	.58	" 16 2"	.46	.50
" 23 "	.54	.58	" 8	.68	.74	" 16 3"	.60	.66
" 1 "	.84	.90	" 19	.46	.50	" 16 4"	.84	.90
" 5 "	.38	.42	" 2— $\frac{1}{8}$ "	.24	.26	" 16 5"	1.06	1.14
" 3 "	.38	.42	" 2— $\frac{1}{4}$ "	.46	.50	" 13	..	.44
" 18 "	.38	.42	" 2— $\frac{3}{8}$ "	.68	.74	" 13B	..	.44

Slide Rods $\frac{3}{8}$ " Galvanized round Iron, per foot, \$.05

Awning Blocks {	Shell 1" long, single, No. 0	\$.40	Double, No. 00	\$.60
Galvanized,	" $1\frac{1}{2}$ " " " 1	.50	" " 2	.70
per dozen,	" $1\frac{3}{4}$ " " " 3	.90	" " 4	1.20

Awning Cleats, Galvanized, per dozen, No. 1, $4\frac{1}{2}$ ", \$.20; No. 2, 6", \$.30; No. 3, 8", \$.50.

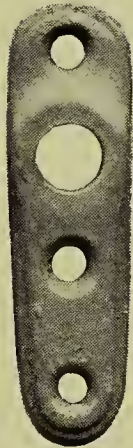
For illustrations, see pages 25 and 26

Awning Fittings: Wall Plates for $\frac{3}{8}$ inch Pipe

Malleable Iron



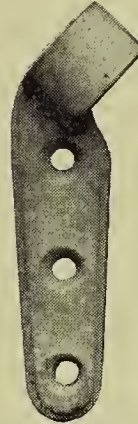
No. 21



No. 11



Left 45°
No. 23



Right



45°
No. 1



45°
No. 5



45°
No. 3

Wall Plates Nos. 21, 11, 23, 1 and 3 have concave backs to fit either flat surfaces or Pipe and are drilled and countersunk for flat-head wood Screws

Wall Plates Nos. 5 and 3 are drilled for $\frac{3}{8}$ inch Bolt or Cap Screw

Awning Fittings



Eye End
No. 18



Y Coupling
No. 7



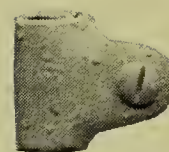
Fork End
No. 19



Awning Cleat



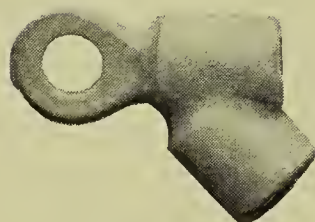
Nut Slides*
for Slide Rods
No. 13



Jaw Slides
for Slide Rods
No. 13B



Nut End
No. 14



Bracket Eye
No. 8



Jaw Hinge
No. 17



Double
Awning Blocks



Single
Awning Blocks



Round Socket
for $\frac{1}{4}$ ", $\frac{3}{8}$ " or $\frac{1}{2}$ "
Pipe
No. 2



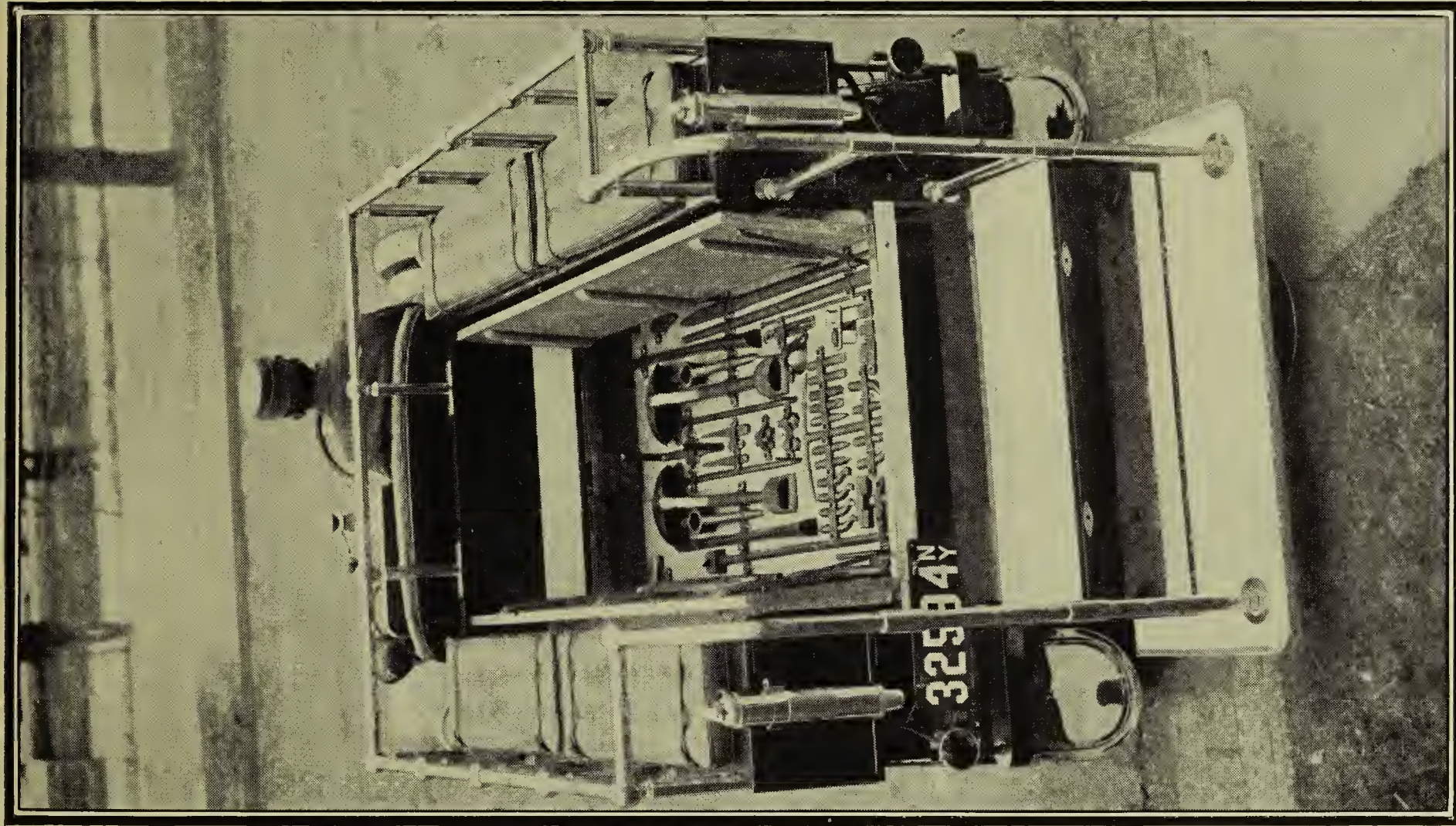
Eye Stub†
No. 16



Slide Rods
 $\frac{3}{8}$ " Round
Iron
Galvanized

*This fitting also with Cotter pin instead of Nut, is called "Side Cotter Slides No. 13A "

†Eye Stubs are made $1\frac{1}{2}$ ", 2", 3", 4" and 5" long, end to centre of eye.



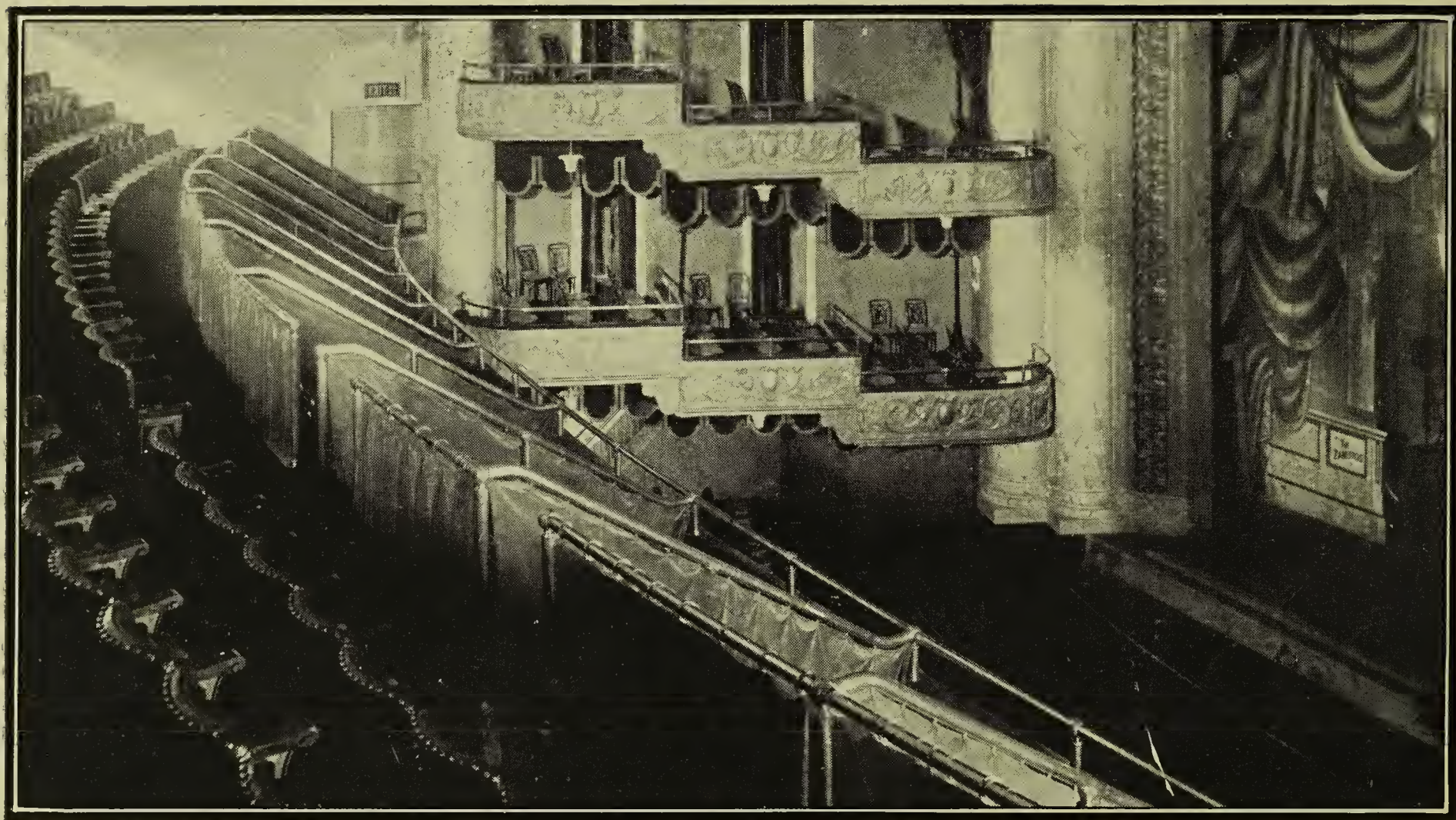
Emergency Truck of the Consolidated Gas Company illustrating Brass Guard Railings



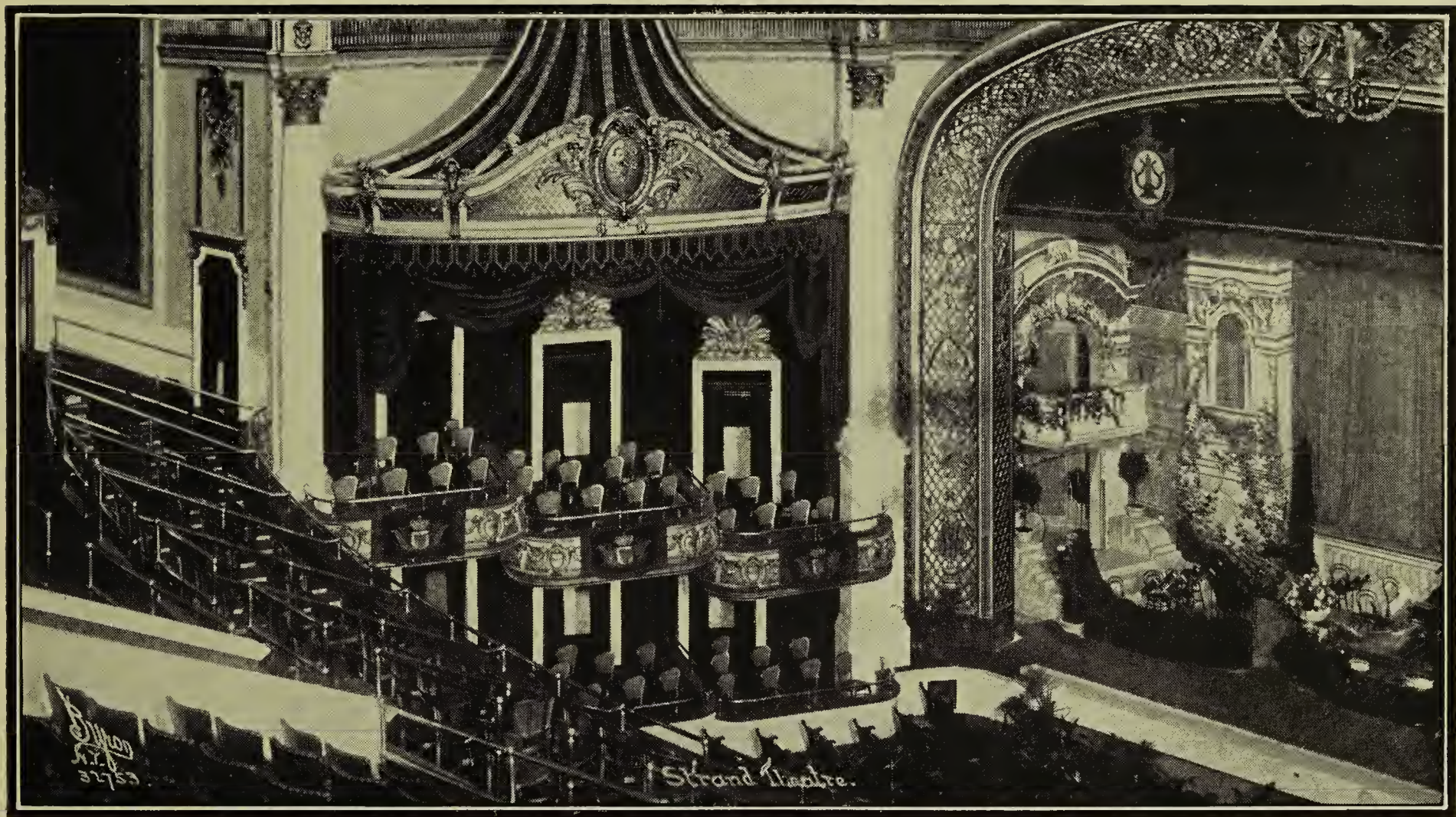
Brass or Bronze Railings for All Purposes made from Our Own or Customers' Designs



Iron Railing with Bronze Hand Rail for Stairways



Interior of Keeny Theatre, showing Balcony and Box Railings



Strand Theatre
Brass Railings for Theatres, Auditoriums, etc.

Brass Railing Fittings

We make a complete line of Globe pattern and plain Railing Fittings in either Brass or Bronze, polished and finished lacquered, antique or oxidized. Reducing sizes will be furnished similar to those in the Malleable Iron Fittings (see page 10), at an advance of 25 per cent over straight sizes, largest opening governing the size and price.



Brass, Polished, I. P. Size	$\frac{1}{2}$ "	$\frac{3}{4}$ "	1"	$1\frac{1}{4}$ "	$1\frac{1}{2}$ "	2"	$2\frac{1}{2}$ "	3"
Elbow	\$.40	\$.60	\$.80	\$1.20	\$1.60	\$2.20	\$4.00	\$7.00
" Side Outlet	.75	1.00	1.45	1.70	2.05	2.90	6.00	8.50
Tee	.60	.85	1.10	1.70	2.00	2.75	6.00	8.50
" Side Outlet	1.05	1.25	1.50	2.00	2.30	3.25	7.00	10.00
Cross	1.05	1.25	1.50	2.00	2.40	3.25	7.00	10.00
" Side Outlet	1.20	1.45	1.70	2.12	2.60	3.50	8.00	11.50
Acorn Ornament	.40	.65	.80	.90	1.20	2.50	5.00	7.00

These Fittings will be furnished with fine Threads to fit Brass Tubing at an advance of 25%. Lacquering, oxidizing, etc., will be charged extra.

Brass Stair Rail Fittings



For Stairways to Engine Platforms and Galleries; fittings of this type for any angle to order from our adjustable patterns.

Sizes	1"	1¼"	1½"	2"	2½"	3"
Ells	\$1.60	\$2.40	\$3.20	\$4.40	\$8.00	\$14.00
“ S. O.	2.90	3.40	4.10	5.80	12.00	17.00
Tee	2.20	3.40	4.00	5.50	12.00	17.00
“ S. O.*	3.00	4.00	4.60	6.50	14.00	20.00
Cross	3.00	4.00	4.80	6.50	14.00	20.00
“ S. O.	3.40	4.30	5.20	7.00	16.00	23.00
Flange	3.00	4.00	4.80	7.00	14.00	23.00

*In ordering Side Outlet Tees it is necessary to show on which side the Side Outlet is desired, as these are not reversible.

Brass Pipe, Iron Pipe Size

This may be threaded with regular Iron Pipe Dies to fit Standard Iron Pipe Fittings, and is regularly in stock in lengths of 12 feet, without threads.

Pipe, size	$\frac{1}{4}$ "	$\frac{3}{8}$ "	$\frac{1}{2}$ "	$\frac{3}{4}$ "	1"	$1\frac{1}{4}$ "	$1\frac{1}{2}$ "	2"	$2\frac{1}{2}$ "	3"	$3\frac{1}{2}$ "	4"
Weight, per foot . . .	.45	.62	.90	1.25	1.75	2.53	3.04	4.00	6.32	8.5	10.9	12.9
Price, per lb.	\$.39	\$.35	\$.26	\$.25	\$.24	\$.24	\$.24	\$.24	\$.24	\$.24	\$.26	\$.26

Drawn Brass Pipe Iron Lined

This is the most approved substitute for heavy Brass Pipe for Railing work, being stiffer and heavier than the Iron-lined Brass Tube shown on page 36. It is produced by drawing Seamless Brass or Bronze Tubes over Iron Pipe, leaving the product perfectly true, smooth and seamless.

Diameter, inches.		No. 16 Gauge		No. 18 Gauge		No. 20 Gauge	
Outside	Inside	Brass	Bronze	Brass	Bronze	Brass	Bronze
$1\frac{1}{4}$	1 per ft.	\$.56 $\frac{1}{2}$	\$.62 $\frac{1}{2}$	\$.49 $\frac{1}{2}$	\$.53 $\frac{1}{2}$	\$.39 $\frac{1}{2}$	\$.42 $\frac{1}{2}$
$1\frac{3}{4}$	$1\frac{1}{4}$ "	.65	.80	.61	.66 $\frac{1}{2}$	.49 $\frac{1}{2}$	.53 $\frac{1}{2}$
2	$1\frac{1}{2}$ "	.84	.93	.71	.77 $\frac{1}{2}$	.56 $\frac{1}{2}$	.61
$2\frac{1}{2}$	2 "	1.02	1.12	.90	.98	.75	.81
3	$2\frac{1}{2}$ "	1.36	1.49	1.22	1.32	1.00	1.07
$3\frac{1}{2}$	3 "	1.63	1.77	1.42	1.53	1.19	1.27

Seamless Drawn Brass Tubes (not polished or lacquered)

In stock in 12-foot Lengths, no Threads or Couplings; from Mill in Lengths up to 25'-0". They are measured by outside diameters and thickness by Stubb's or Old gauge. They are made from 3-16 to 9-16 inch in diameter varying by sixteenths of an inch, and from 5-8 to 3 inches by eighths of an inch.

We list here only a few sizes most suitable and readily obtained from Stock for Railing work.

Weight per foot

Outside diameter	$\frac{9}{16}"$	$\frac{3}{4}"$	$\frac{7}{8}"$	1"	$1\frac{1}{4}"$	$1\frac{5}{8}"$	$1\frac{7}{8}"$	2"	$2\frac{3}{8}"$	$2\frac{7}{8}"$	$3\frac{1}{2}"$	4"	$4\frac{1}{2}"$
Nearest I. P. size	$\frac{1}{4}"$		$\frac{1}{2}"$		1"	$1\frac{1}{4}"$	$1\frac{1}{2}"$		2"	$2\frac{1}{2}"$	3"	$3\frac{1}{2}"$	4"
O. G. No. 10 = $\frac{9}{64}$ — lbs.	..	..	..	..	..	..	..	..	..	4.24	5.21	5.98	6.75
" No. 12 = $\frac{7}{64}$ "	..	..	..	..	..	1.91	2.22	2.38	2.85	3.48	4.27	4.89	5.52
" No. 14 = $\frac{5}{64}$ + "	..	.64	.75	.88	1.12	1.48	1.72	1.84	2.20	2.68	3.27	3.75	4.23
" No. 16 = $\frac{1}{16}$ + "	.37	.51	.60	.70	.89	1.17	1.36	1.45	1.73	2.11	2.58	3.05	3.33
" No. 18 = $\frac{3}{64}$ + "	.30	.39	.46	.54	.68	.89	1.03	1.10	1.32	..	..	..	..
" No. 20 = $\frac{1}{32}$ + "	.21	.28	.33	.38	.49	..	..	..	..	..	..	..	..

This Tubing cannot be threaded with Iron Pipe Threads and we will quote special prices for Threading. The sizes enumerated as "nearest I. P. size" can be screwed with fine Threads into specially tapped fittings from Iron pipe patterns.

Brass Tubes, Iron Lined



Close Joint



Lock Joint



Brazed

These tubes are considerably cheaper than Solid Brass Tubes of equal strength, the Steel lining providing the necessary stiffening effect. They cannot be threaded, but we have built large quantities of Rails with this material and furnished fittings ready for pinning, making up all the posts at the shop.

We have three grades of Iron lined Tubes of which the “Brazed” is the most perfect, being absolutely round and not showing any seam or joint on the outside. The “Close” and “Lock” joints Tubing being less expensive is adapted to the horizontal runs, where the joint can be made unnoticeable by turning the tube seam downward.

These tubes are furnished “rough” (not polished) unless so ordered.

Size outside diameter . . .	$\frac{3}{8}$ "	$\frac{1}{2}$ "	$\frac{5}{8}$ "	$\frac{3}{4}$ "	$\frac{7}{8}$ "	1"	$1\frac{1}{8}$ "	$1\frac{1}{4}$ "	$1\frac{1}{2}$ "	$1\frac{3}{4}$ "	2"	$2\frac{1}{2}$ "	3"
Brass “Brazed” per ft.	\$.08	\$.08	\$.10	\$.12	\$.14	\$.18	\$.22	\$.25	\$.32	\$.45	\$.56	..	..
Bronze “Brazed” “	.09	.09	.11	.13	.15	.20	.24	.27	.35	.48	.60	..	..
Brass “Lock Joint” “	.08	.08	.10	.12	.14	.18	..	.25	.32	..	.56	..	..
Brass “Close Joint” “	.08	.08	.10	.12	.14	.18	..	.25	.32	..	.56	..	..
Polishing “	.05	.05 $\frac{1}{2}$	.06	.06 $\frac{1}{2}$	.07	.07 $\frac{1}{2}$	.08	.09	.10	.11 $\frac{1}{2}$	.14	\$.21	\$.27
“ and Lacquering “	.06 $\frac{1}{2}$	.06 $\frac{3}{4}$	.07	.08	.08 $\frac{3}{4}$	.09 $\frac{1}{2}$	.10 $\frac{1}{4}$	.11	.12 $\frac{1}{2}$	.14 $\frac{1}{2}$	.19	.27	.35

Brass Fittings

Malleable Iron pattern
with or without bead

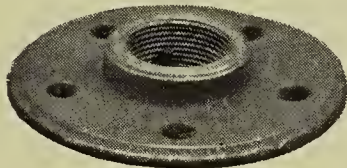


Size		3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
Elbow, finished		\$.45	\$.56	\$.75	\$1.10	\$1.55	\$2.00	\$3.00	\$5.50	\$9.00
" Side Outlet	"	1.35	1.70	2.25	3.30	4.70	6.00	9.00	16.50	27.00
Tee	"	.63	.80	1.05	1.50	2.15	2.80	4.20	7.75	12.75
" Side Outlet	"	1.80	2.05	2.70	3.90	5.70	7.40	11.50	20.00	35.00
Cross	"	.90	1.10	1.50	2.20	3.10	4.00	6.00	11.00	18.00

For reducing sizes add 25%.

Brass Rail Flanges

Finished



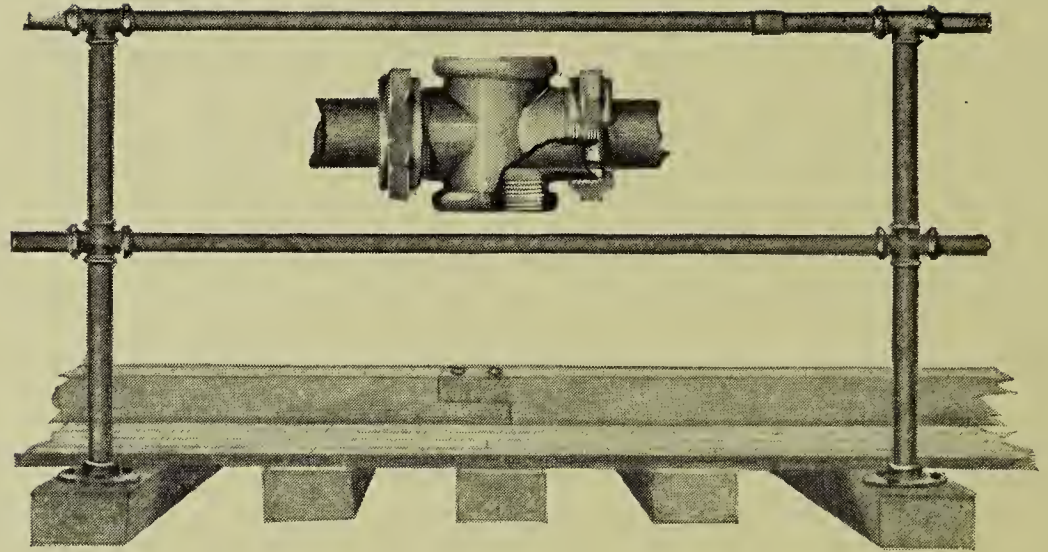
Other styles of Flanges to
order from special patterns at
special prices.

Size in.		Size in.		Size in.		Size in.		Size in.		Size in.	
1/2 x 3	\$1.40	3/4 x 3	\$1.40	1 x 3	\$1.40	1 1/4 x 4	\$2.00	1 1/2 x 4	\$2.25	2 x 5	\$3.30
1/2 x 3 1/2	1.50	3/4 x 3 1/2	1.50	1 x 3 1/2	1.60	1 1/4 x 4 1/2	2.40	1 1/2 x 5	2.80	2 x 6	4.20
1/2 x 4	1.80	3/4 x 4	1.75	1 x 4	2.00	1 1/4 x 5	2.70	1 1/2 x 6	3.60		
		3/4 x 5	2.35	1 x 5	2.50	1 1/4 x 6	3.10				

Manhattan “L” Road Fittings

This fitting was designed for and adopted by the Manhattan Elevated R. R. Co., who have erected over 40 miles of 2, 3 and 4 pipe railing with it, all the posts of which were furnished by us. As shown in cut this fitting permits the erection of Guard Rails

with random lengths of Pipe, without cutting for panels. The horizontal pipes slide through the fittings and are rigidly held in place by a split Taper ring, which encircles the pipe and bites fast upon it under the pressure of the nut. The entire fitting is of Malleable iron, and we are prepared to make up by machinery any quantity of posts for 2, 3 or 4 Pipe Railings. The flanges are especially made with long threads and of heavy pattern. The rails are 1 in. and posts are $1\frac{1}{4}$ in. Pipe.



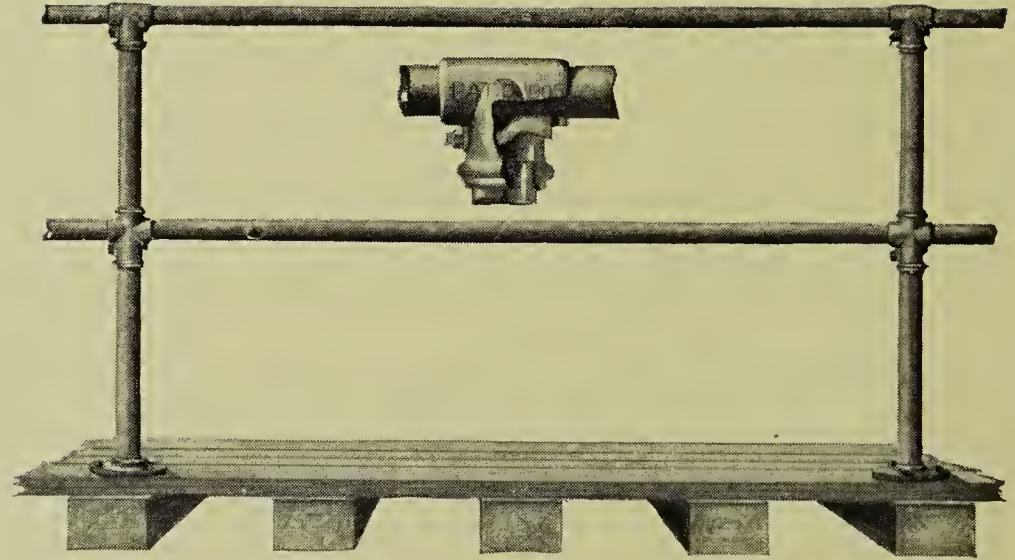


Manhattan Elevated Railway Express Station, illustrating Footwalk Railing described on
Opposite Page

“Subway” Rail Fitting

(Patented 1905)

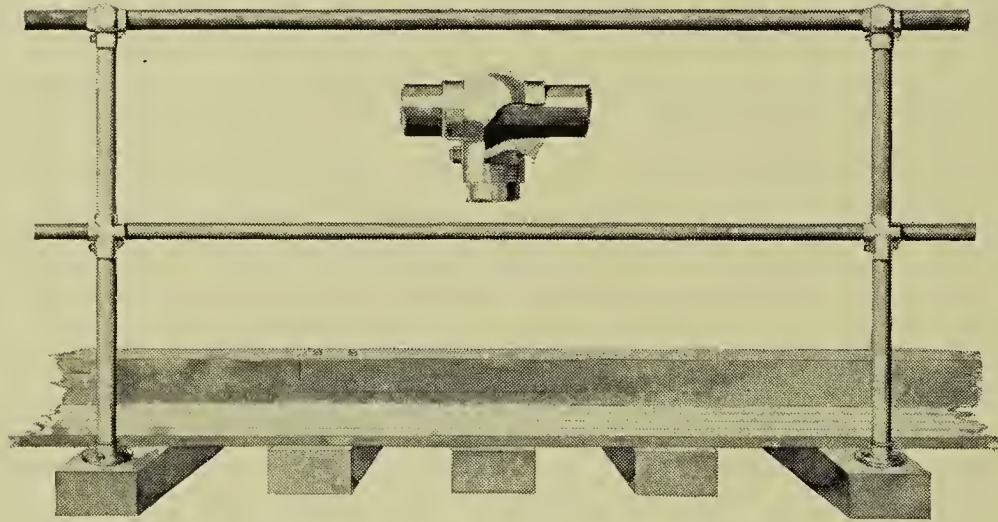
This fitting was designed by us and adopted by the Rapid Transit Subway Commission, and we erected over 10 miles of 2 pipe Guard Rails along the footpaths of the Elevated portion of the Subway system. The horizontal pipe rails slide through as in the “Manhattan L Road” fitting, but are held rigidly to the post by means of a drop forged Key or Wedge Bolt, which is driven up by a hammer-blow and then secured by the $\frac{5}{16}$ in. Nut on opposite end. The shape of this Key as well as its material makes this Joint elastic under vibration, and it has made the “Subway” fitting successful in operation, although its increased simplicity makes it less expensive in cost of installation. The flanges on these Posts have also been made specially and are fitted with pads on the under side next to the Bolt holes, and a sharp edge around its lower circumference, all of which cut into the surface of the wooden tie and offer a resistance to the loosening effect of the vibration caused by passing of trains.





Ten Miles of Footpath Railings erected on Elevated Section of Subway System, furnished and erected by us

"B. R. T." Rail Fittings



THERE were some objections by the engineers for the Public Service Commission to our subway fitting shown on page 40, the pipe in the posts where the subway fitting is used being $1\frac{1}{4}$ inches and the rails 1 inch; the posts spaced 4 feet 6 inches center to center. So we made up a new design, making the pipe in the posts and the top rail $1\frac{1}{2}$ inches and the lower rail $1\frac{1}{4}$ inches, spacing the posts 9 feet center to center.

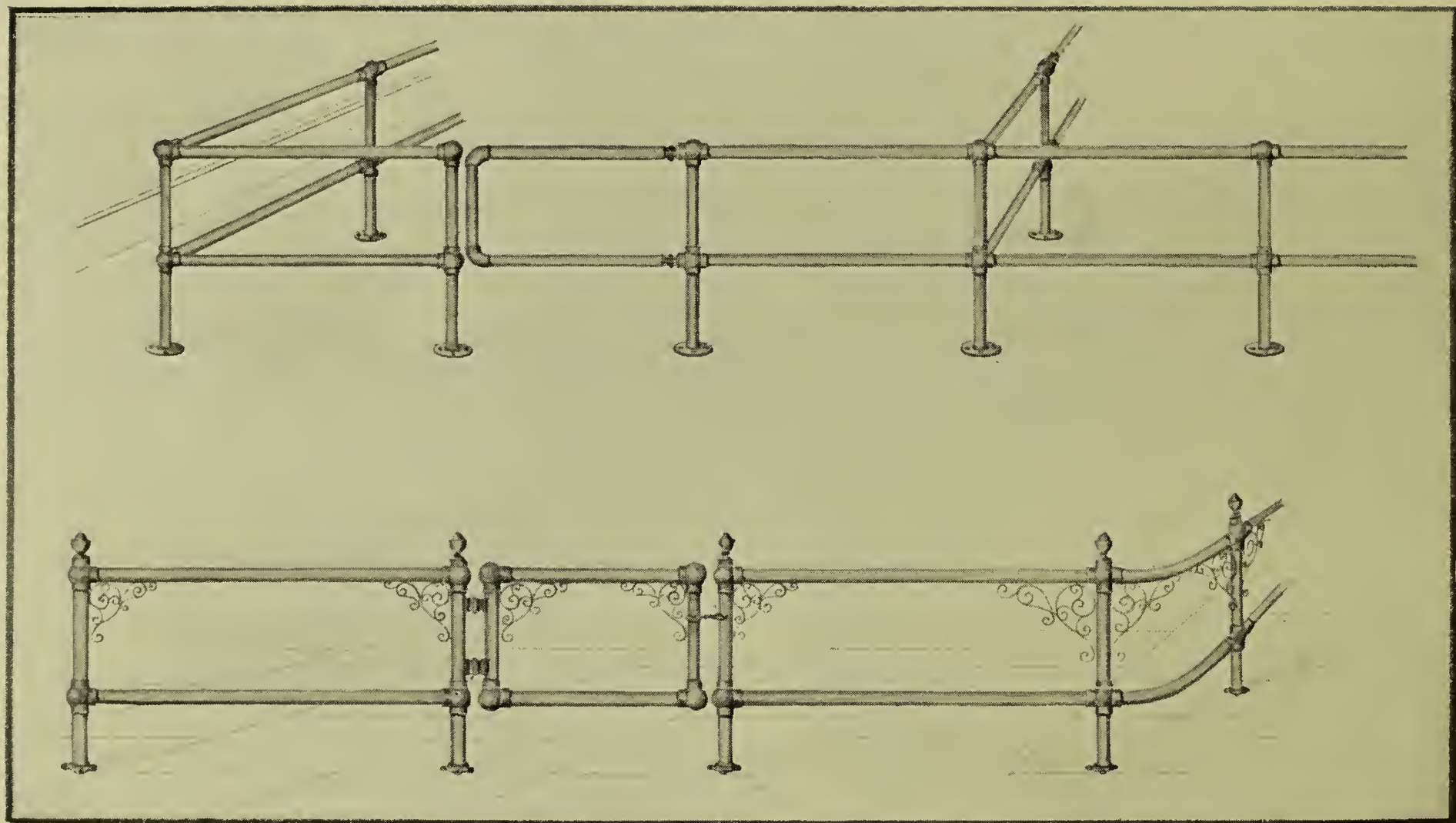
We also changed the shape of the fitting somewhat, and increased the size and accessibility of the wedge non-rattling device. The special features of the flange on the bottom of the posts we have retained.

We have furnished and erected on new elevated railroad structures in Manhattan, Brooklyn and Queens 38 miles of this railing, and have furnished (the railroad erecting themselves) 17 miles of the railing.

We highly recommend this fitting. Prices on application.

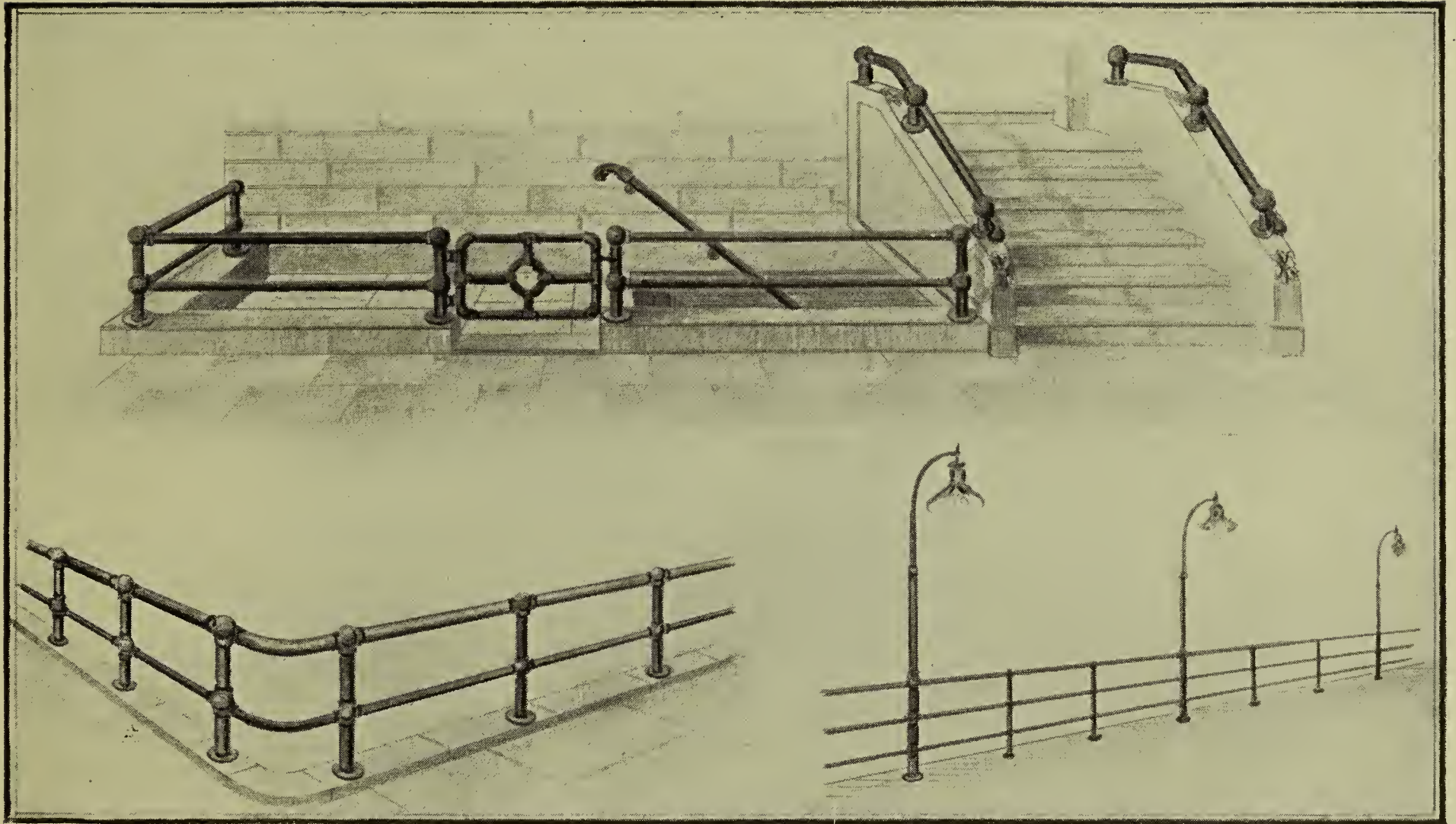


Elevated Structure, showing Guard Railings made up with B. R. T. Fittings shown on Opposite Page



Pipe Railings for Office, Exhibit or Engine Room Enclosures

Stoop and Area Rails in Brass, Bronze or Iron



Sidewalk Area Rails on Coping

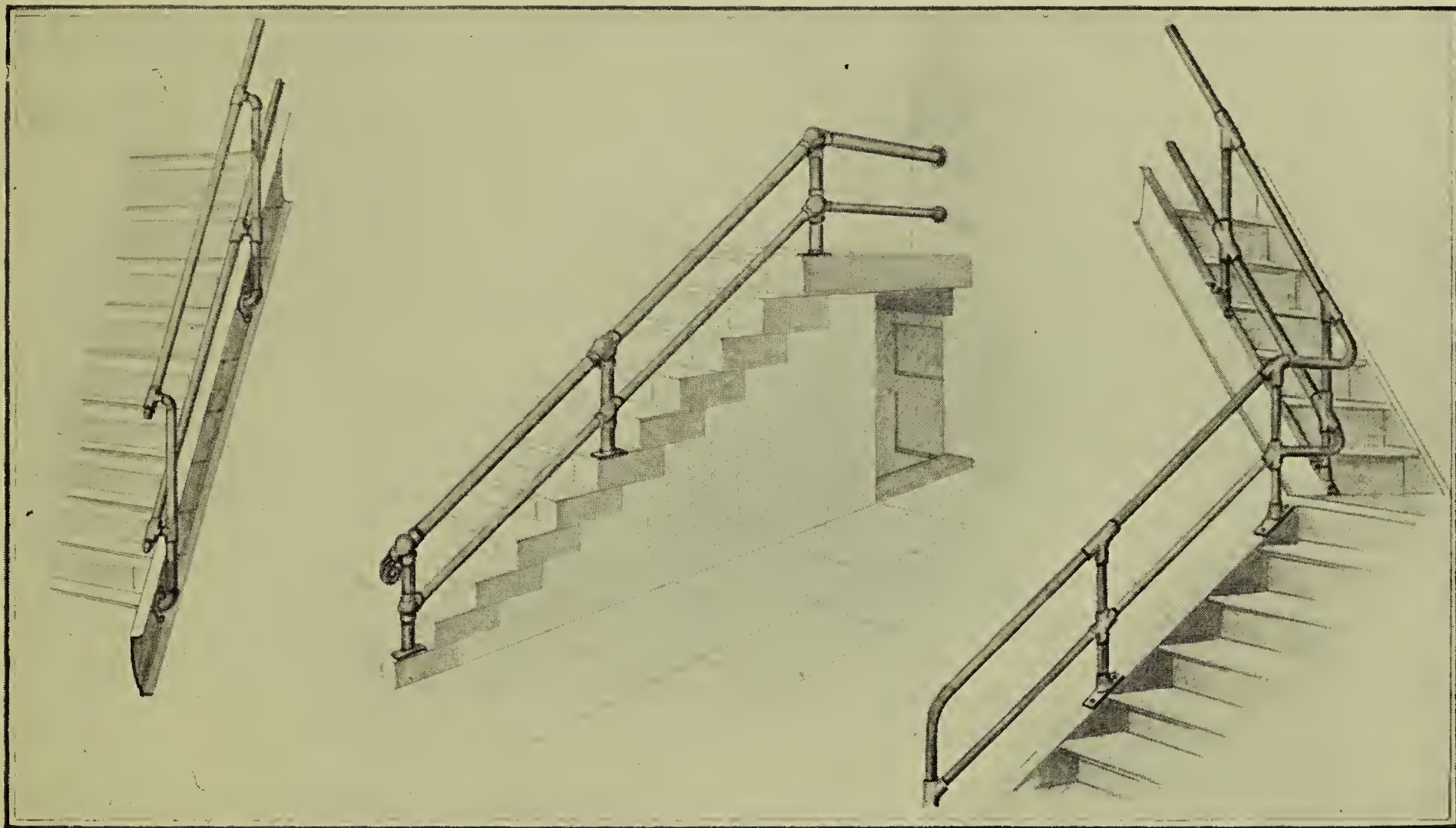
Board Walk Rail and Lampposts

Entrance Rails for Ferry Houses, Public and Ball Grounds



Lawn and Garden Fences, using Pipe and Chain

Gallery and Platform Railing



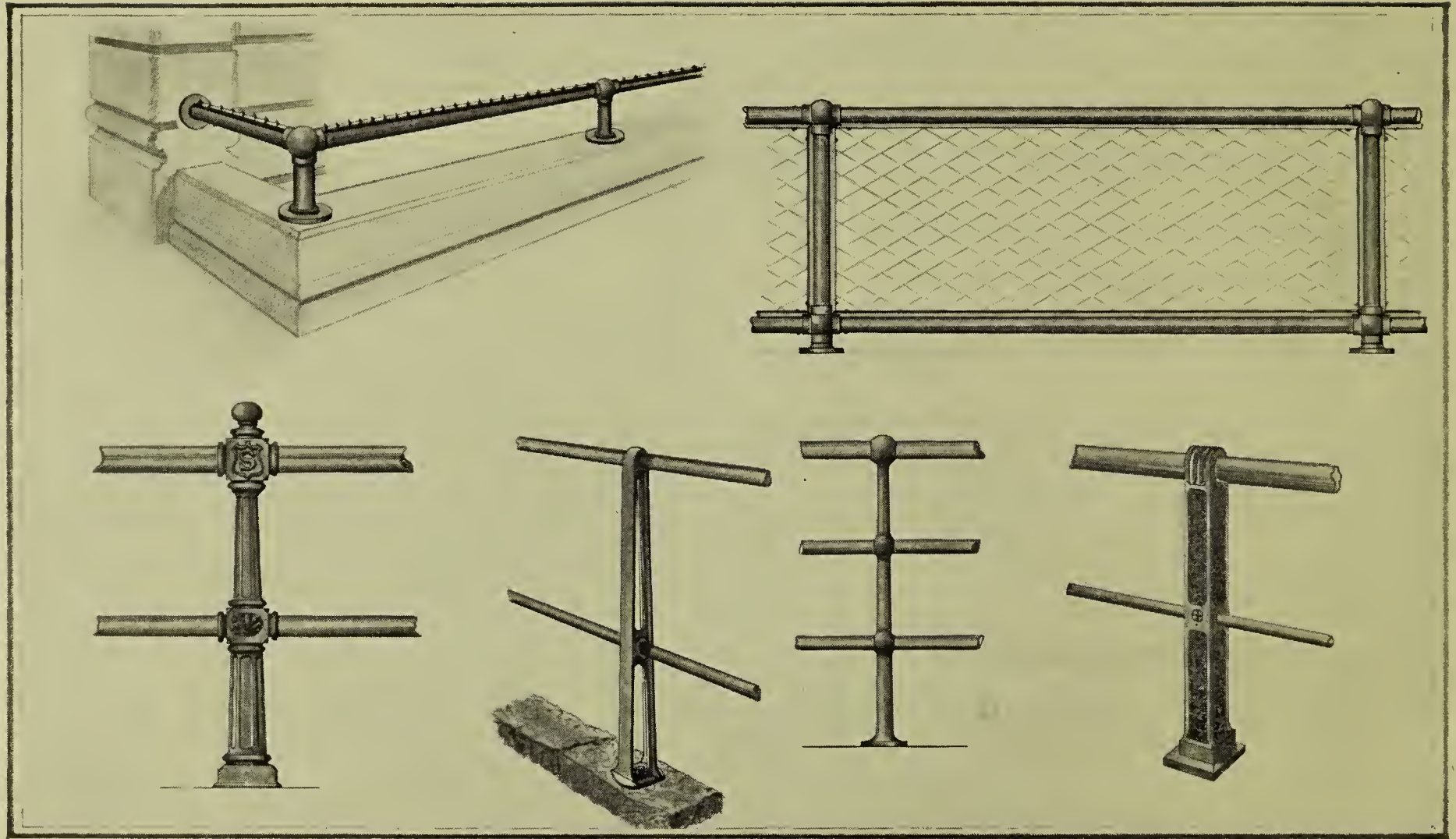
Stairway Rail

Stoop Rails

Fire Escape Hand Rails

Area Coping Rail

Deck Rails, Wire Net Paneled

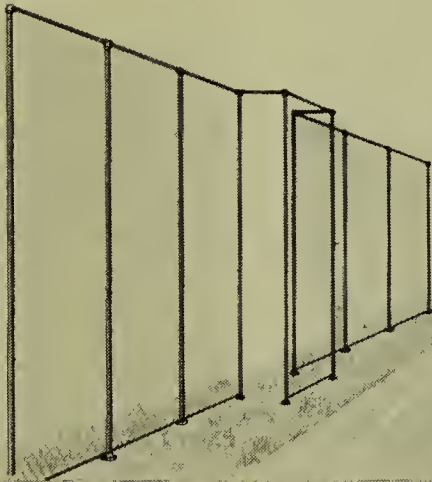
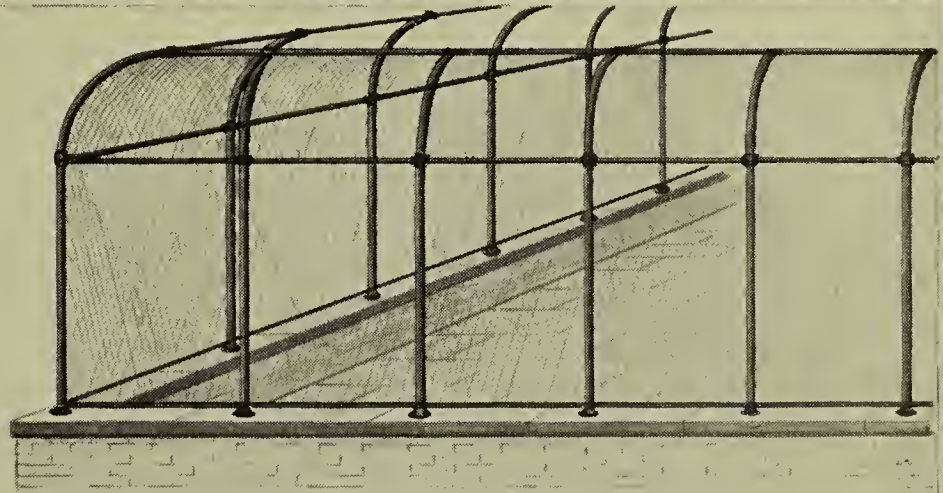


Cast Iron Railing Posts

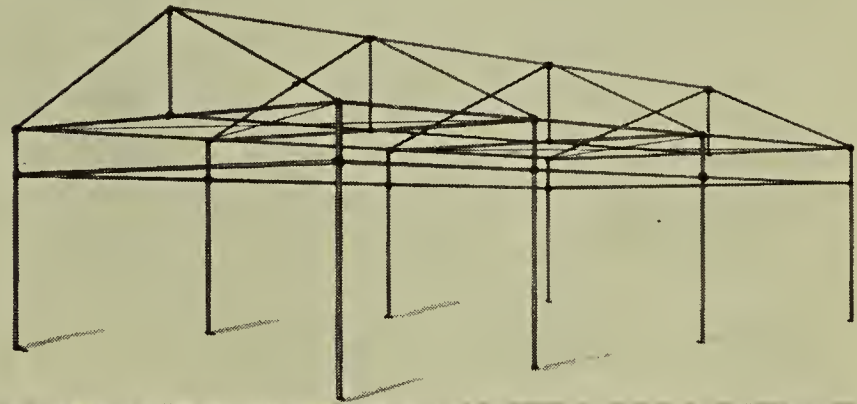
Carriage Canopy



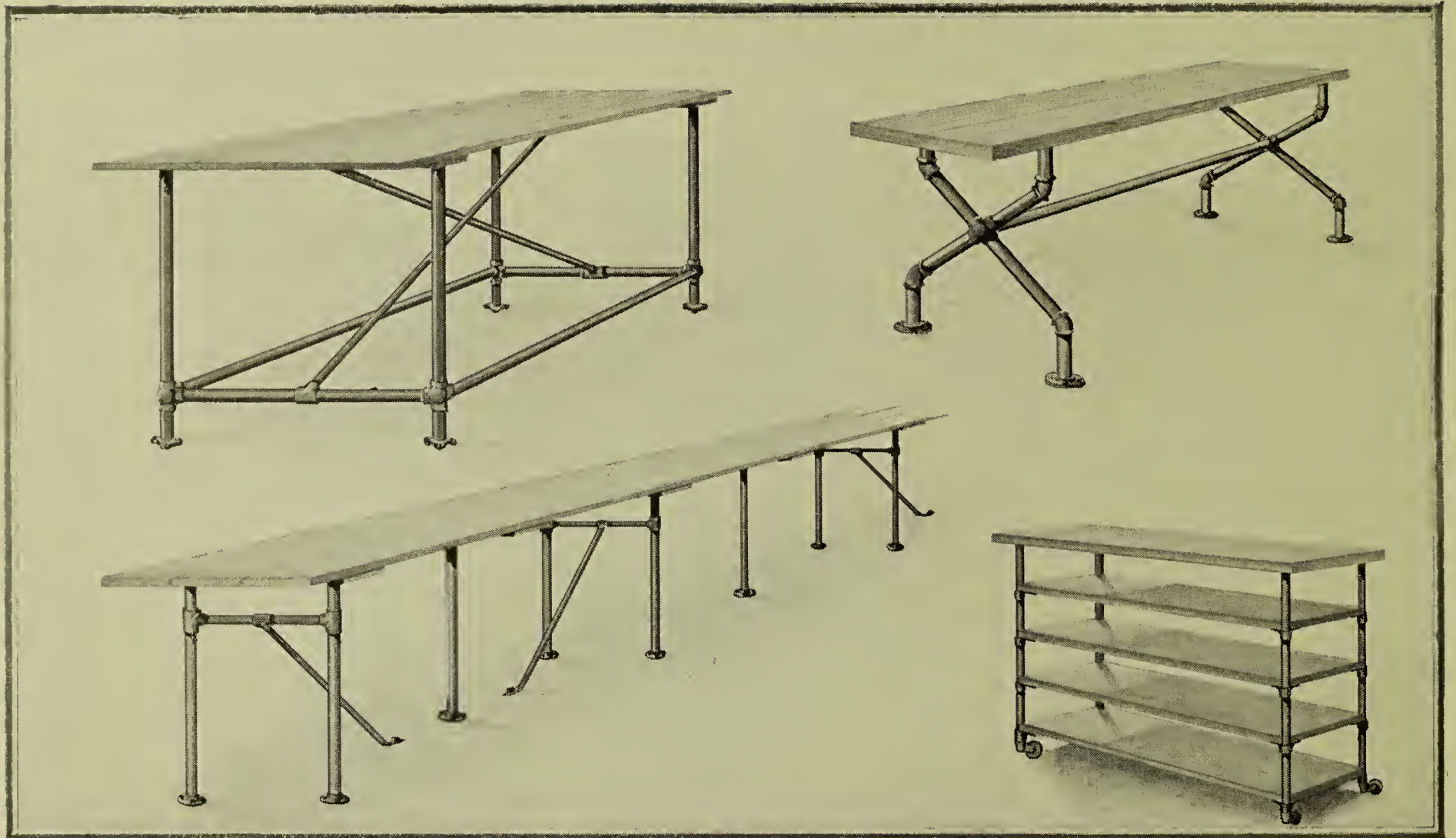
Roof Garden Playground Enclosure



Backstop for Tennis Court

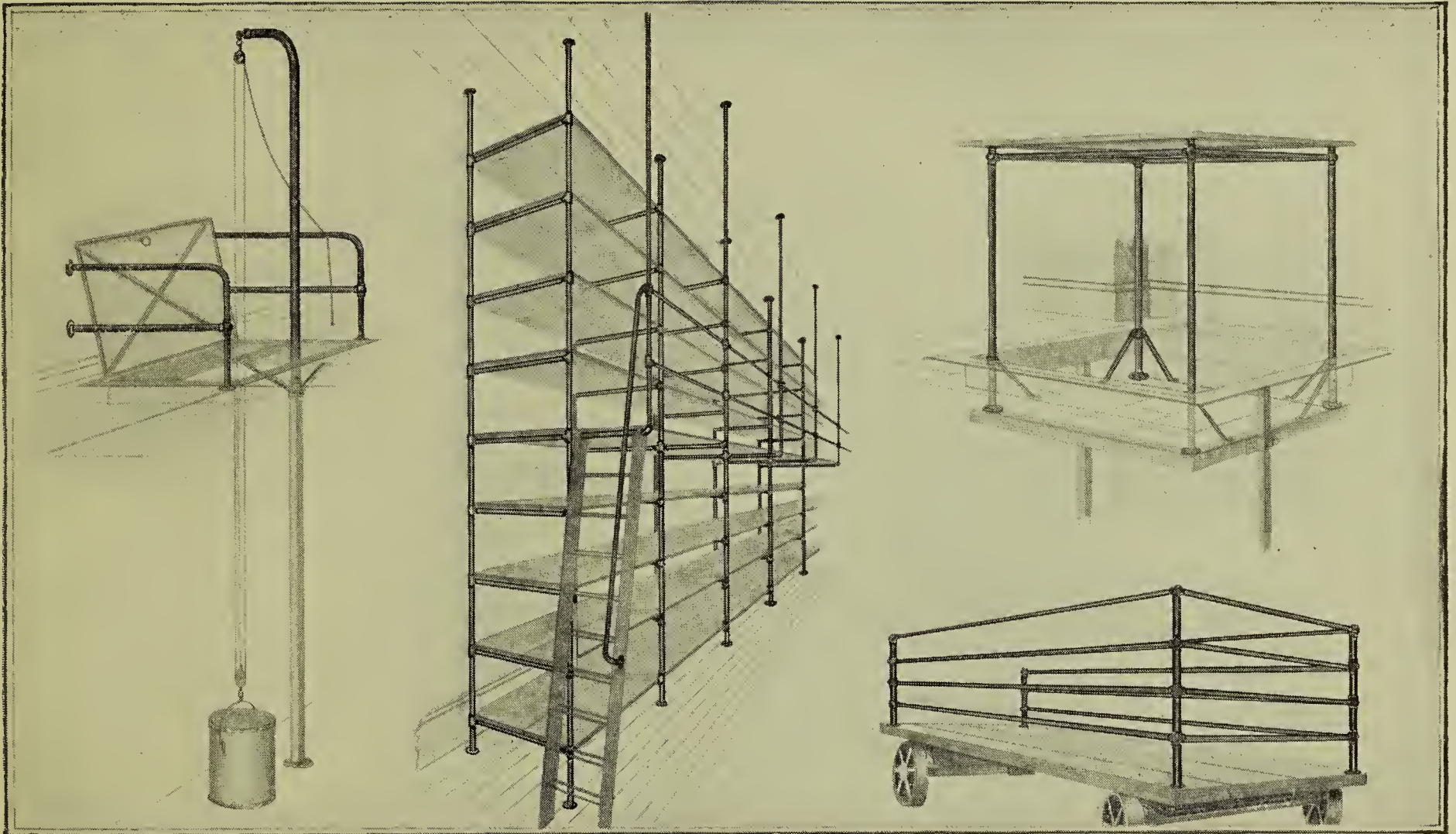


Tent Frames for Seaside, Shows, Etc.



Bookbinders' Benches

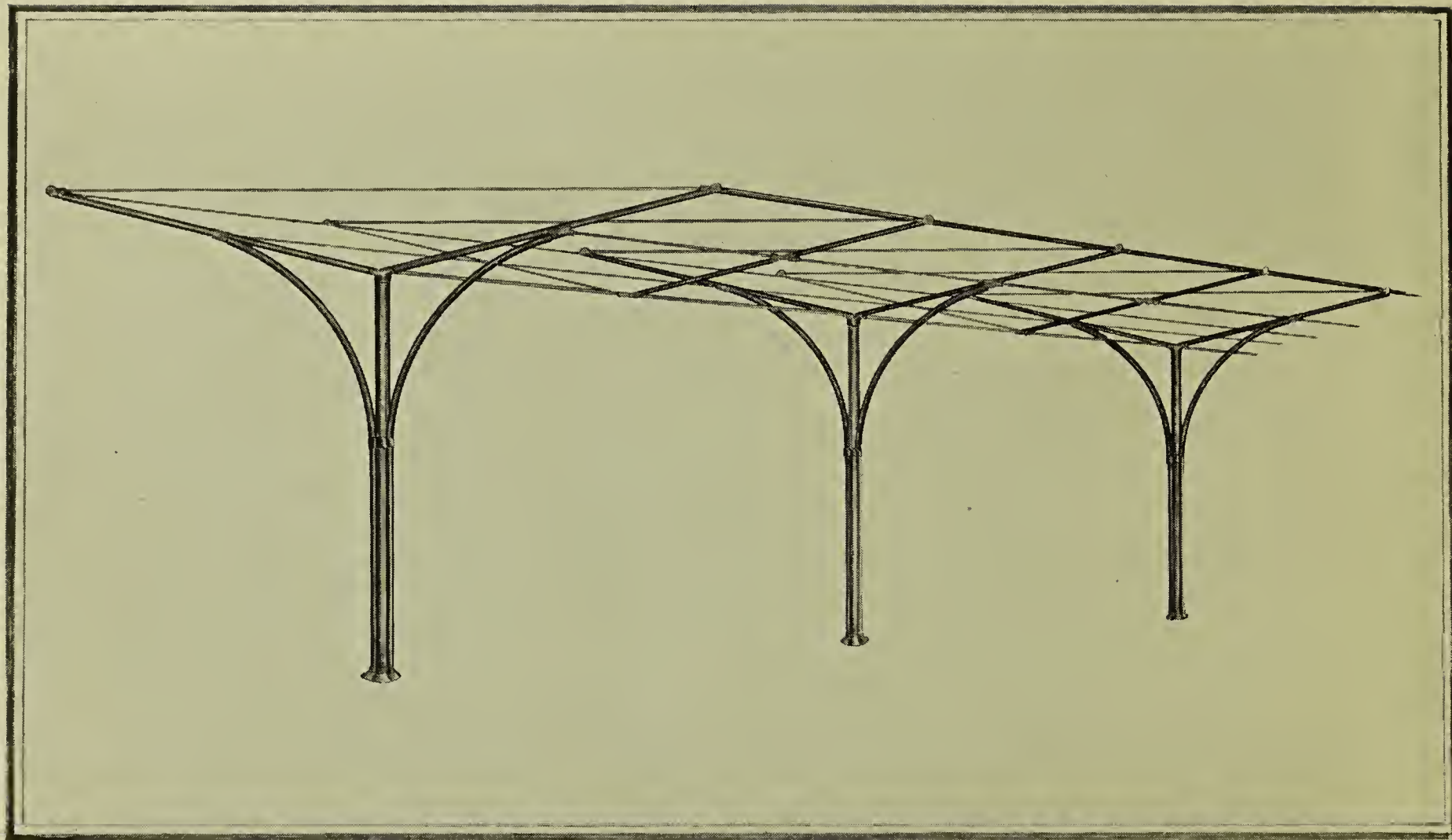
Shelf and Rack Frames with or without Rollers



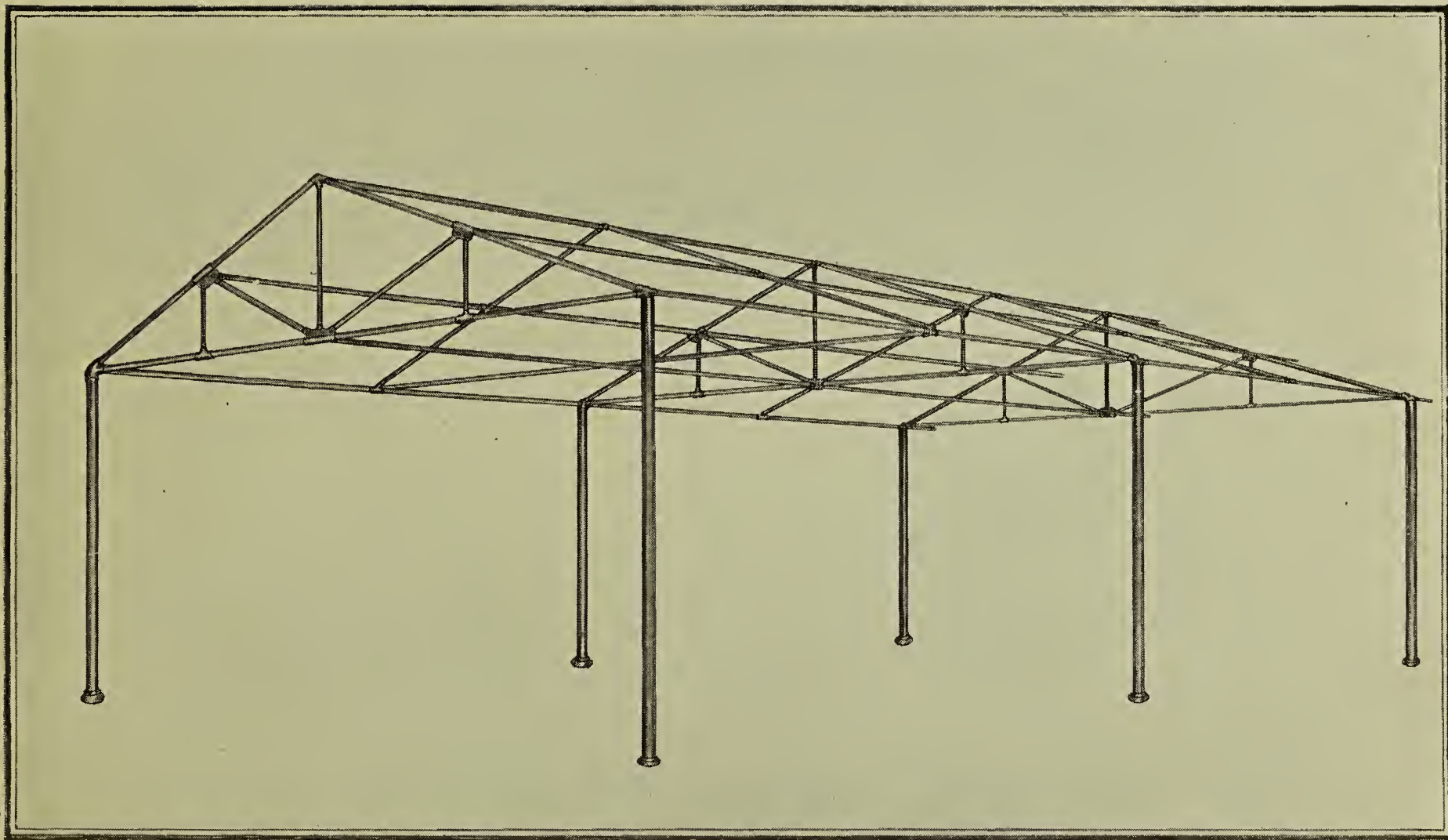
Telescoped Ash Hoist Davits

Shelving Frames for Warehouses

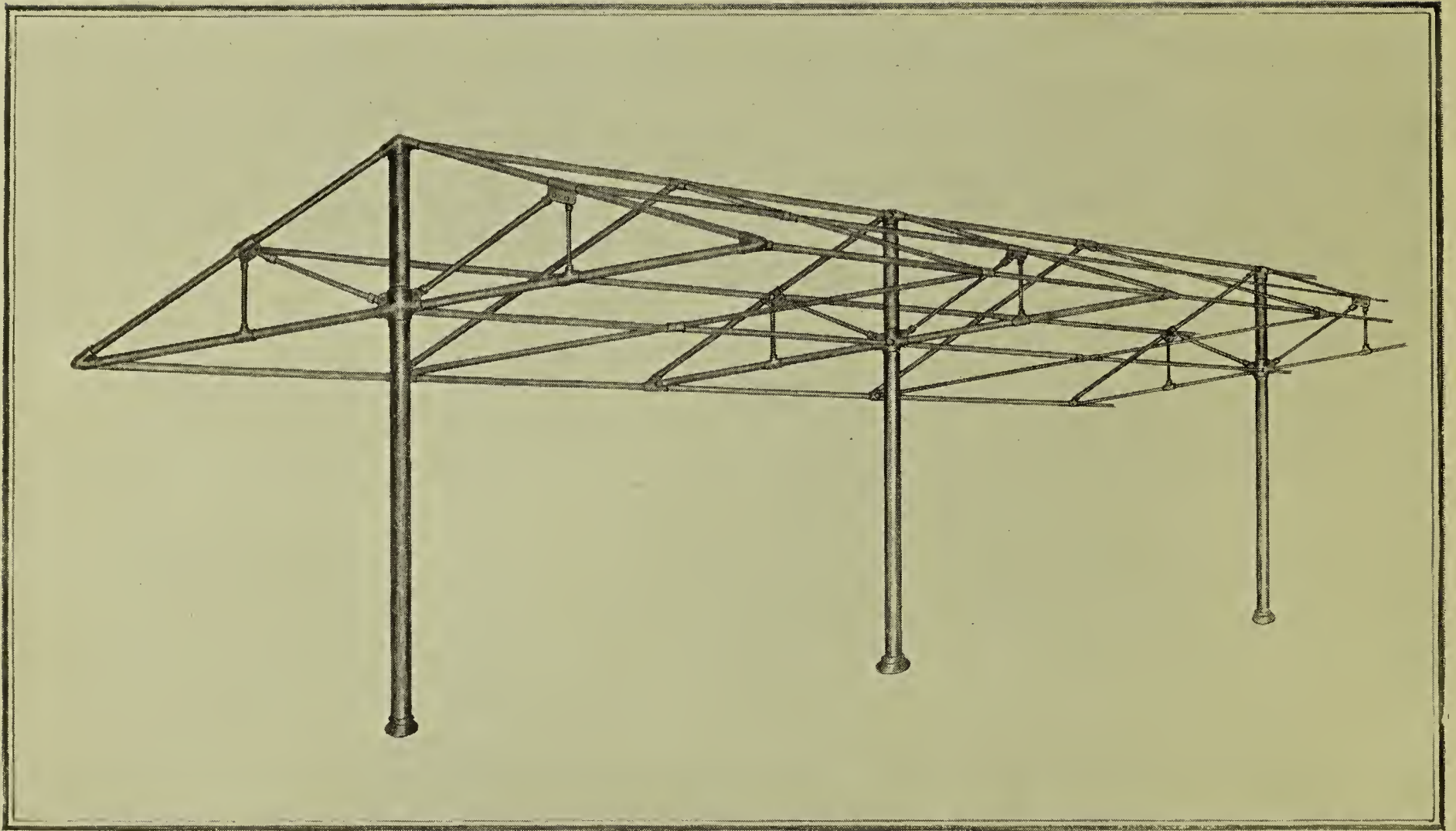
Rails for Paper Box Trucks



Railroad Station Shed, drained through Pipe inside of Center Columns



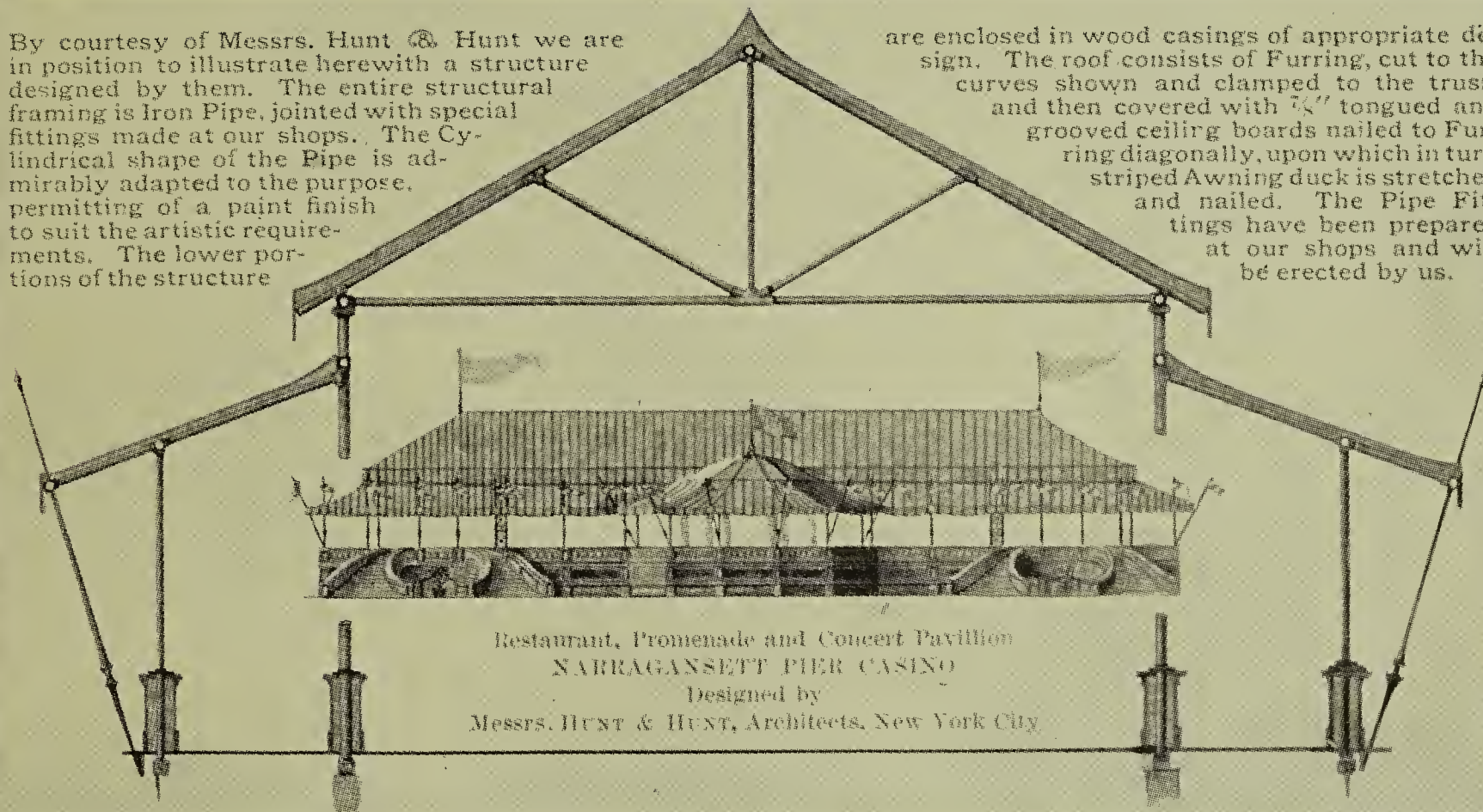
Tubular Frame Structure for Freight Sheds, Garages and Other Purposes, which may be covered with Sheet Iron or Canvas



A Cheap Construction for Temporary or Permanent Shed, made entirely of Pipe

By courtesy of Messrs. Hunt & Hunt we are in position to illustrate herewith a structure designed by them. The entire structural framing is Iron Pipe, jointed with special fittings made at our shops. The Cylindrical shape of the Pipe is admirably adapted to the purpose, permitting of a paint finish to suit the artistic requirements. The lower portions of the structure

are enclosed in wood casings of appropriate design. The roof consists of Furring, cut to the curves shown and clamped to the truss, and then covered with $\frac{3}{4}$ " tongued and grooved ceiling boards nailed to Furring diagonally, upon which in turn striped Awning duck is stretched and nailed. The Pipe Fittings have been prepared at our shops and will be erected by us.



Restaurant, Promenade and Concert Pavillion
NARRAGANSETT PIER CASINO
Designed by
Messrs. HUNT & HUNT, Architects, New York City



Stair Rails for Concrete Stairs

WE have for several years specialized in pipe railings on concrete stairs for garage, factory and loft buildings, and we feel sure that pipe makes the simplest and most durable as well as most economical construction that can be used for the purpose. Among some of our largest installations are the following: Bush Terminal and New York Dock Buildings, South Brooklyn; Robert Gair Buildings, Central Brooklyn; Gretsches Buildings, Williamsburgh; American Dock Buildings, Staten Island; Hoboken Land & Improvement Co. Buildings, Hoboken; Colgate & Co. Buildings, Jersey City. Also Service Station Buildings for Packard, Ford and Hudson Motor Cars.

We will be glad to render any assistance in the way of suggestions or in making up sketches showing the construction of pipe railing for industrial buildings or any other purpose on application.



New York Connecting Railway Viaduct and Bridge over Hell Gate, for which we furnished and erected the Railings



Long Beach, N. Y. 22,000 Feet Boardwalk Railing and Illuminating Poles



Atlantic City, N. J. We erected 12,000 Feet of Railing on this Boardwalk



Queensborough Bridge, New York City, showing Outside Footwalk Railings



Queensborough Bridge, New York City, showing Inside Footwalk Railing.
We furnished and erected 42,000 Feet of Railing, also Lampposts, used along Footwalks and Car Tracks on
this Bridge



Manhattan Bridge, New York City. Outside Footwalk Railing
Total of Eleven Miles of Railing furnished and erected by us on this Bridge on Footwalks, Driveway, and
Elevated Tracks



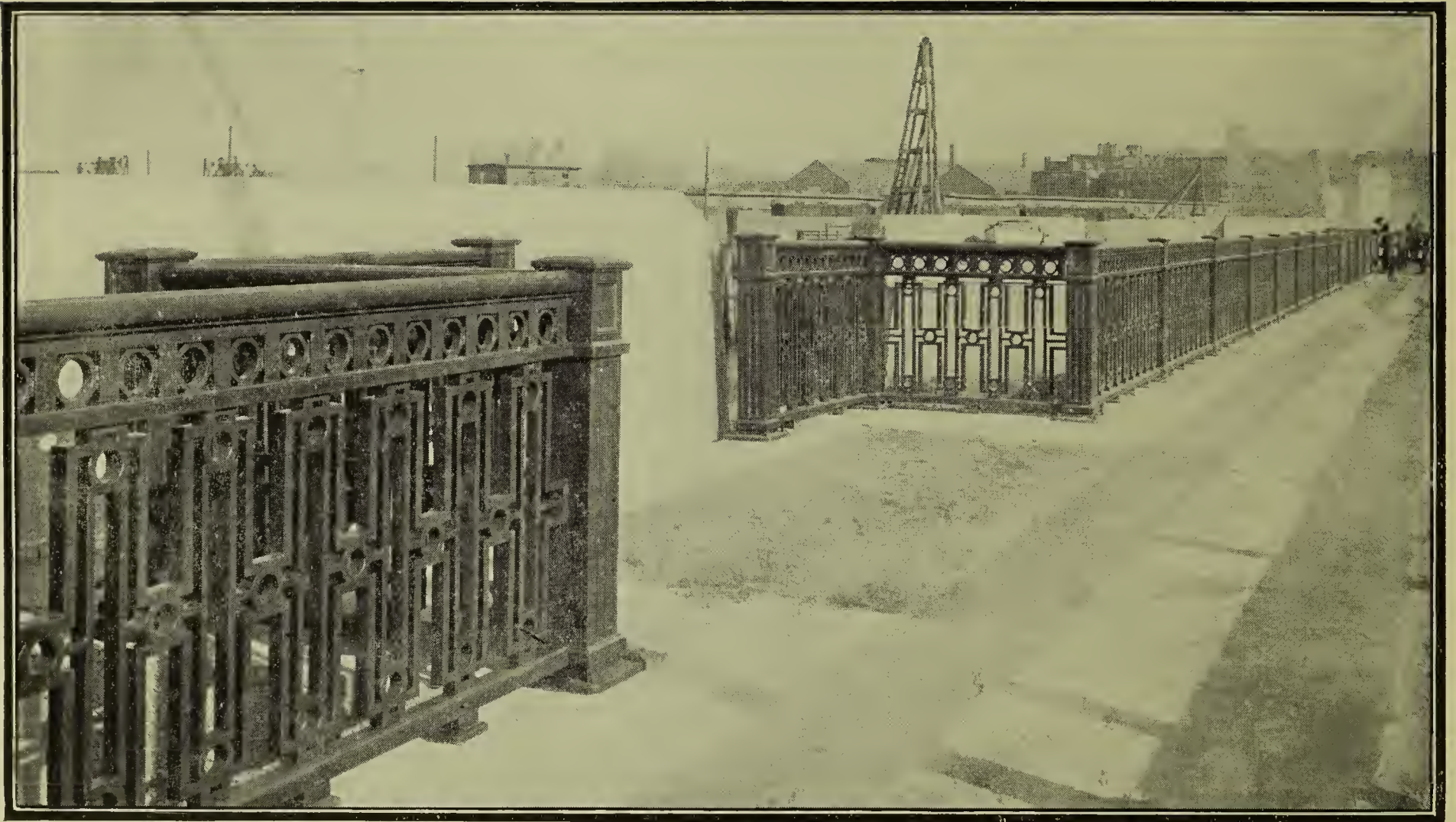
View of Manhattan Bridge, showing Upper Decks, which we equipped for Trolley Cars



Brooklyn Bridge. 1,400 Feet of Heavy Guard Railing used in widening Manhattan Approach



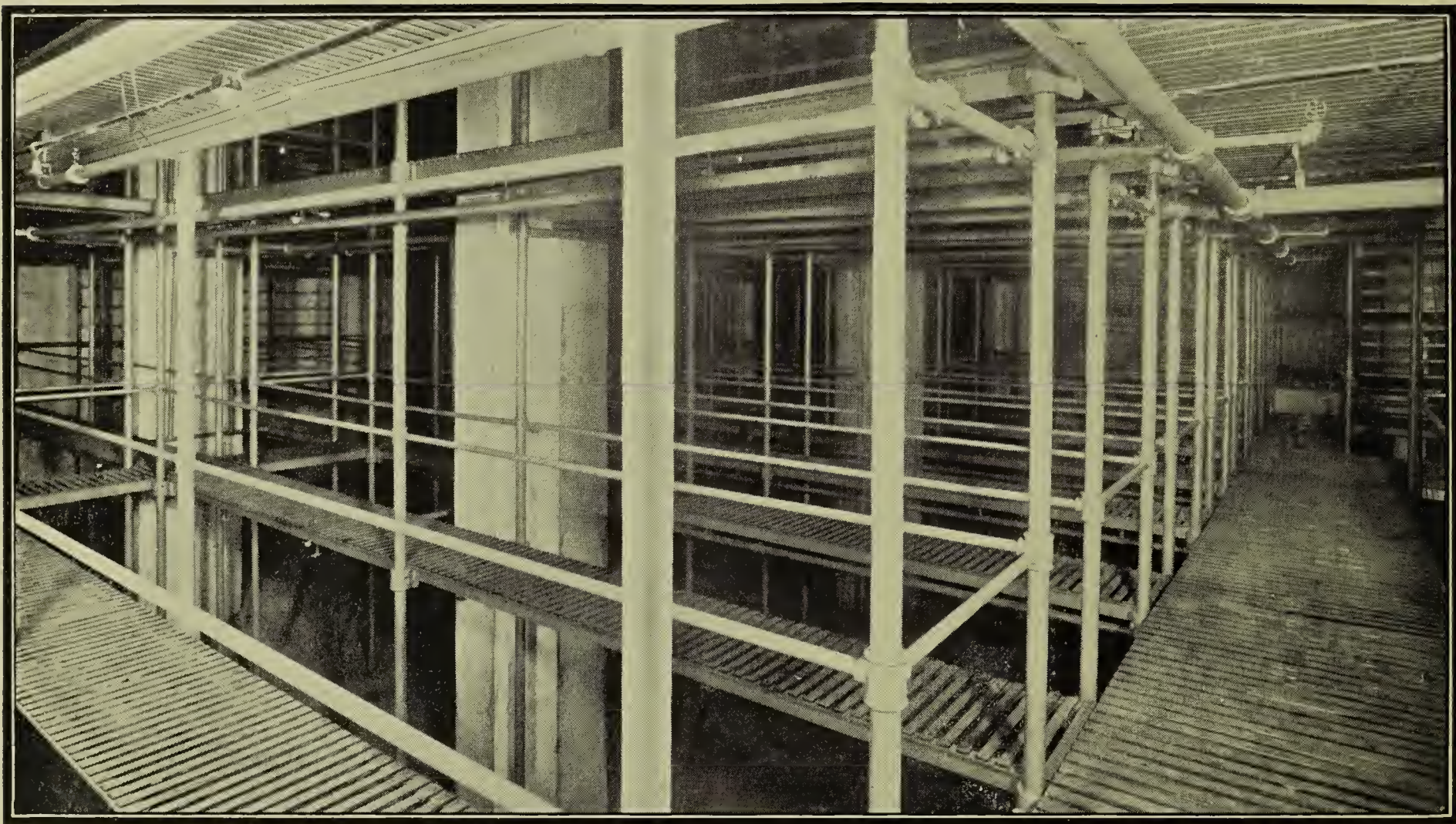
Brooklyn Bridge. We furnished and erected All the Railings added to This Bridge in the
Past Ten Years



Boston, Mass. 4,000 Feet of Cast Iron Railing on New Charles River Dam



Boston, Mass. 7,000 Feet of Railing along Charles River Embankment
between Cambridge and Harvard Bridges



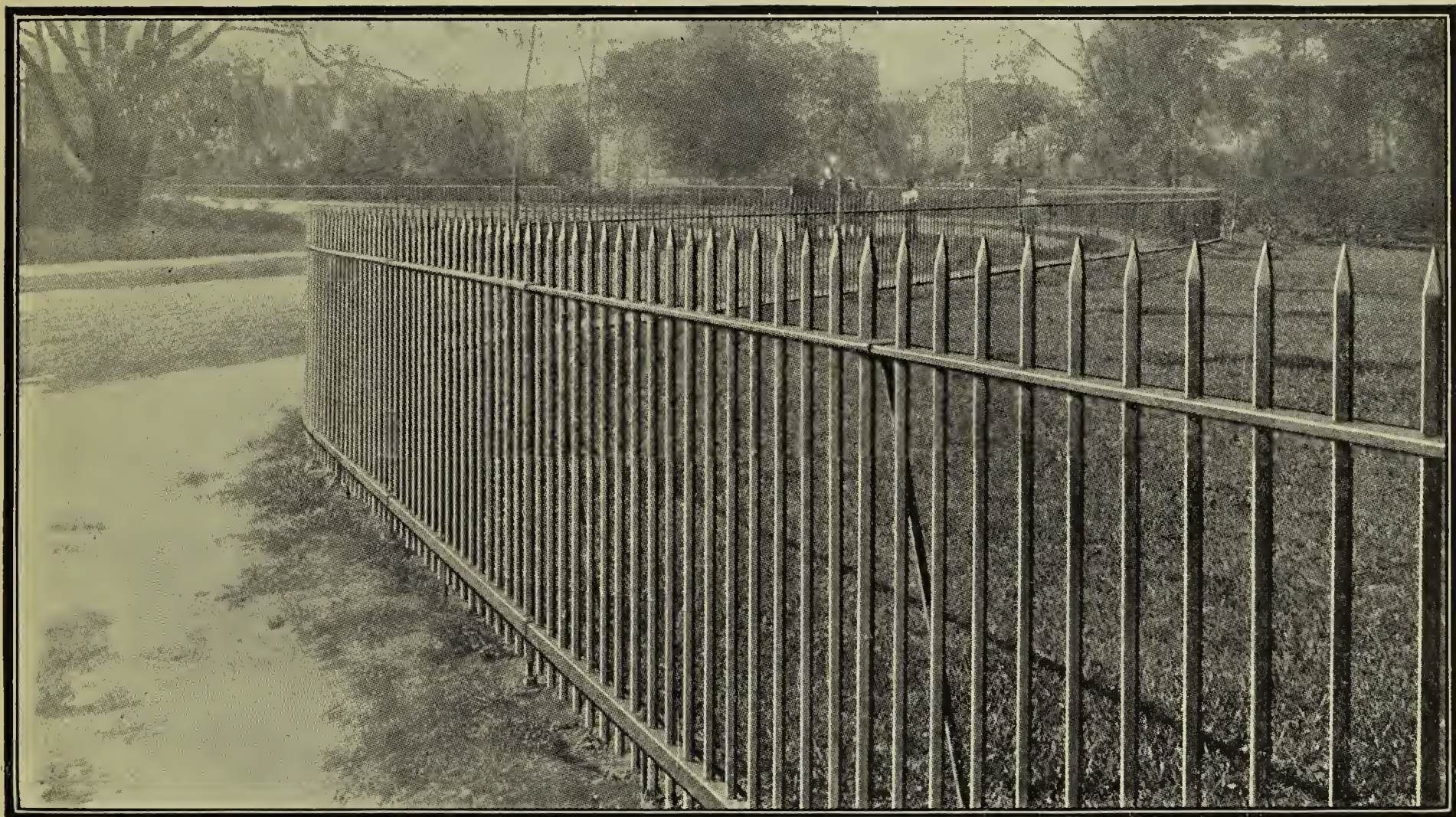
Fur Storage Rooms, Fred. Loeser & Co., Brooklyn
We have supplied similar Racks for Cold Storage Rooms for twelve other large Department and Fur Stores



Platform, Guard and Stairway Rails furnished and erected by us throughout the entire New York Subway System



City Hall Park, New York City. We have erected 100,000 Feet in Various New York Parks



Wrought Iron Picket Fence around Prospect Park, Brooklyn, set in Concrete Bases, with Iron Anchor moulded in and erected with Adjustable Braces



Alwyn Court, New York City. Main Entrance Door and Area Railings



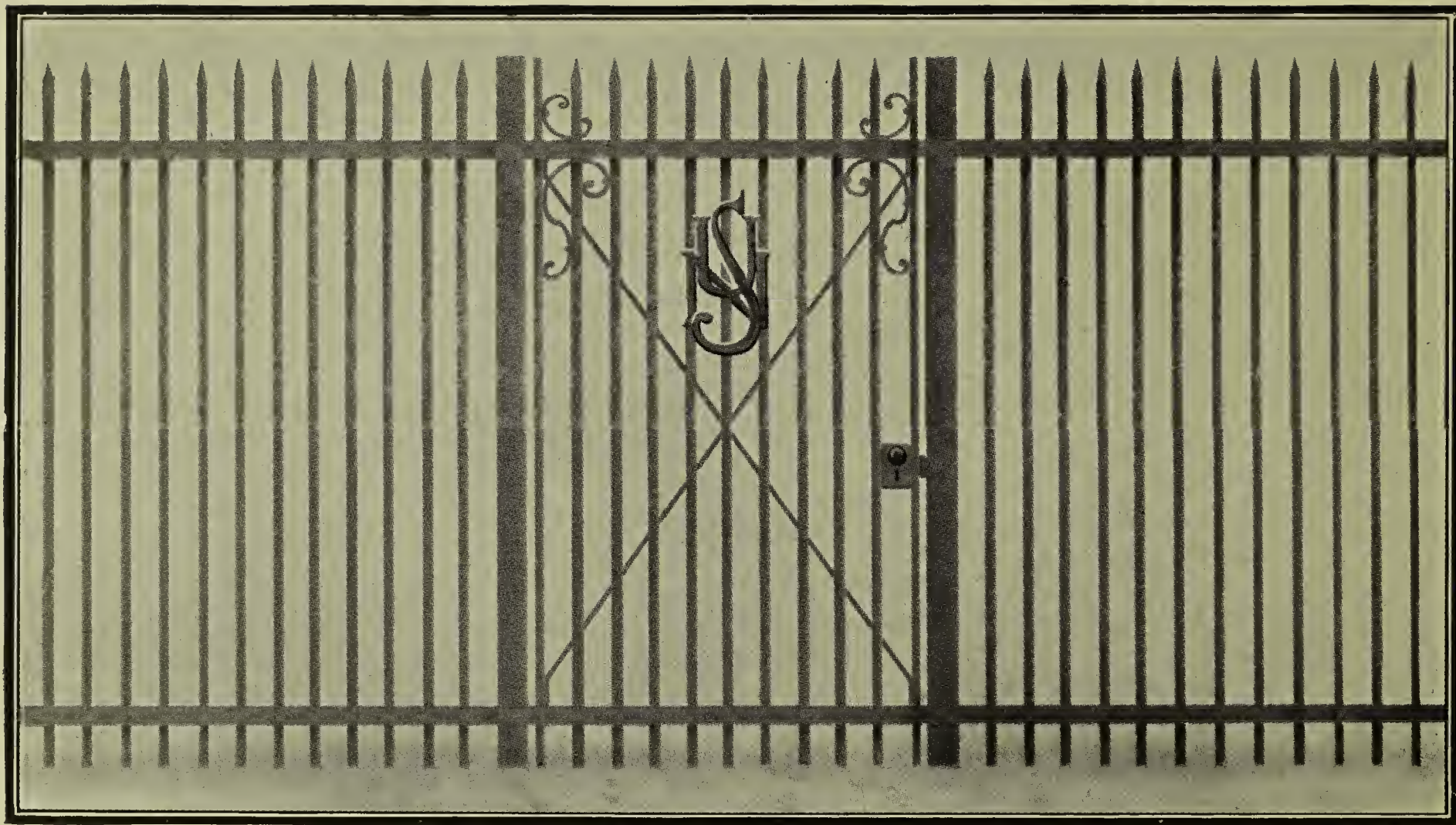
Private Dwelling, New York City, 76th Street and 5th Avenue. Wrought Iron Area Railings



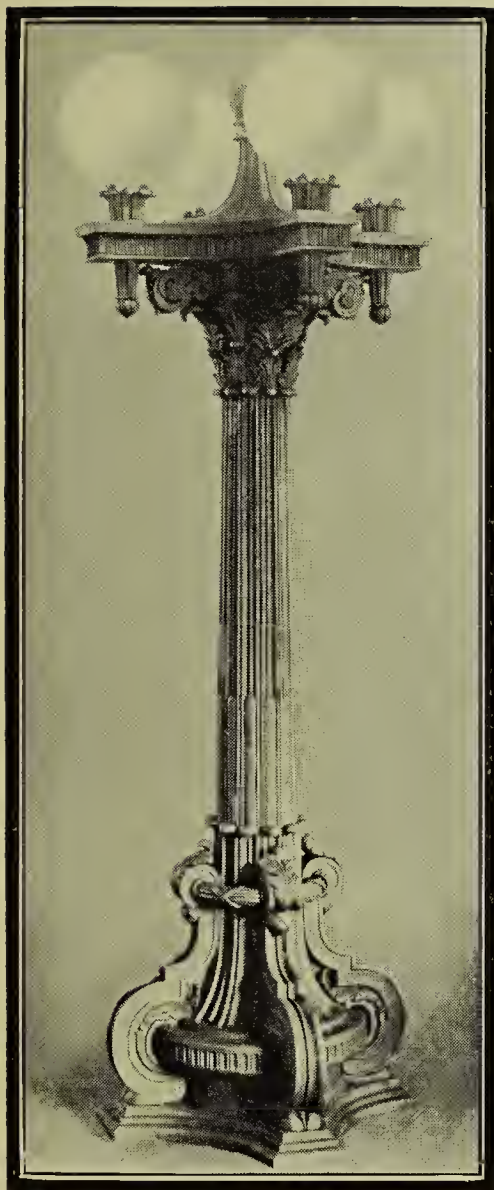
Ornamental Iron Gates made from our Stock Designs or from Architects' Drawings



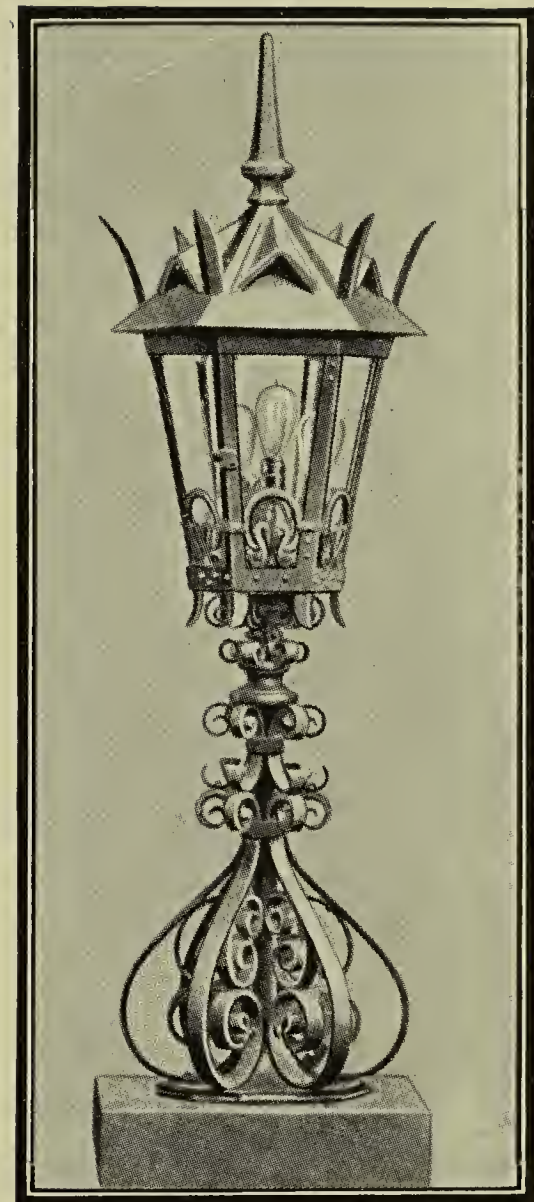
Wrought Iron Fences and Gates to match from our Stock Designs or from Architects' Drawings

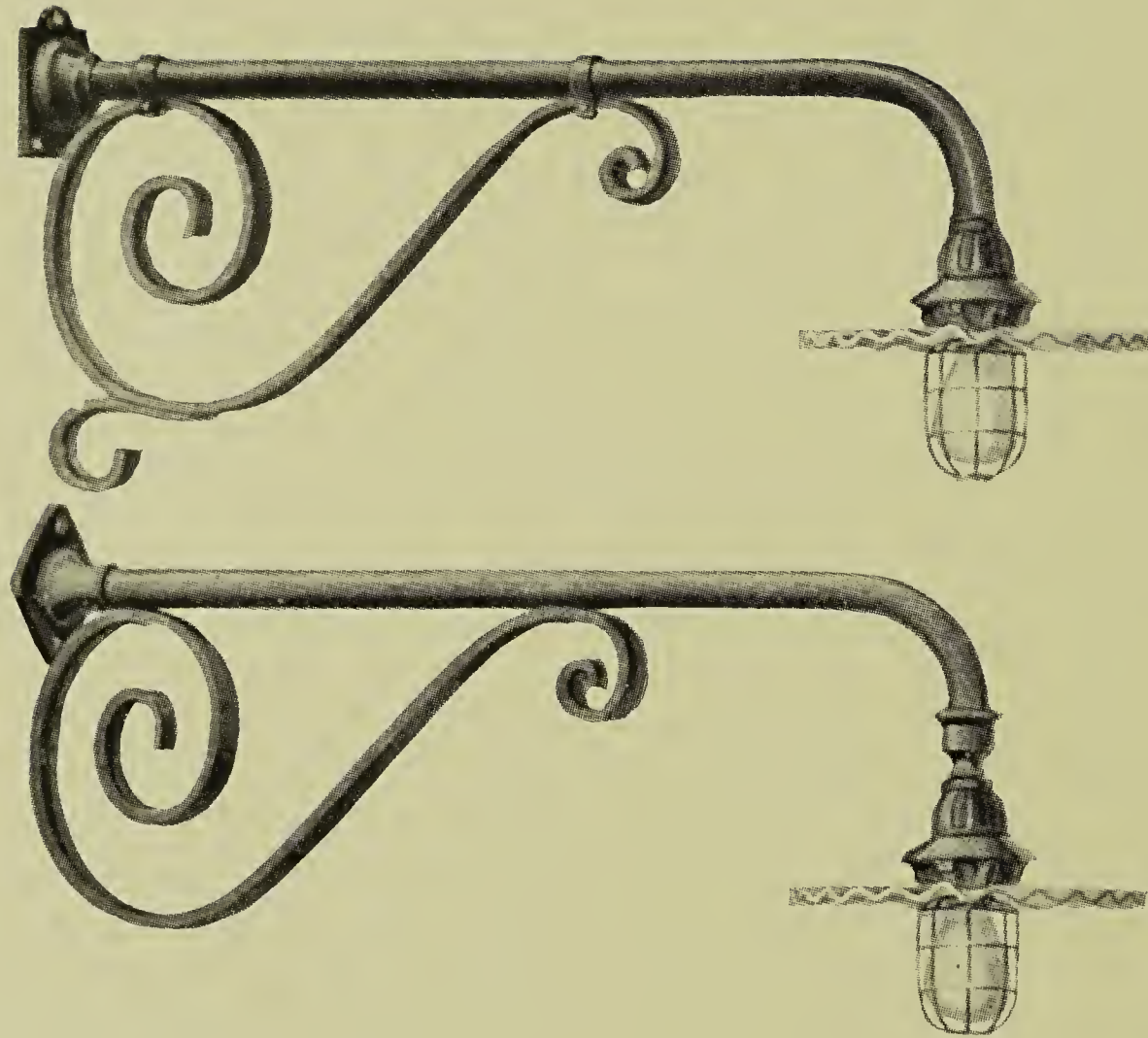


Wrought Iron Picket Fence, set in Concrete Bases, with Iron Anchors moulded in and erected with Adjustable Braces

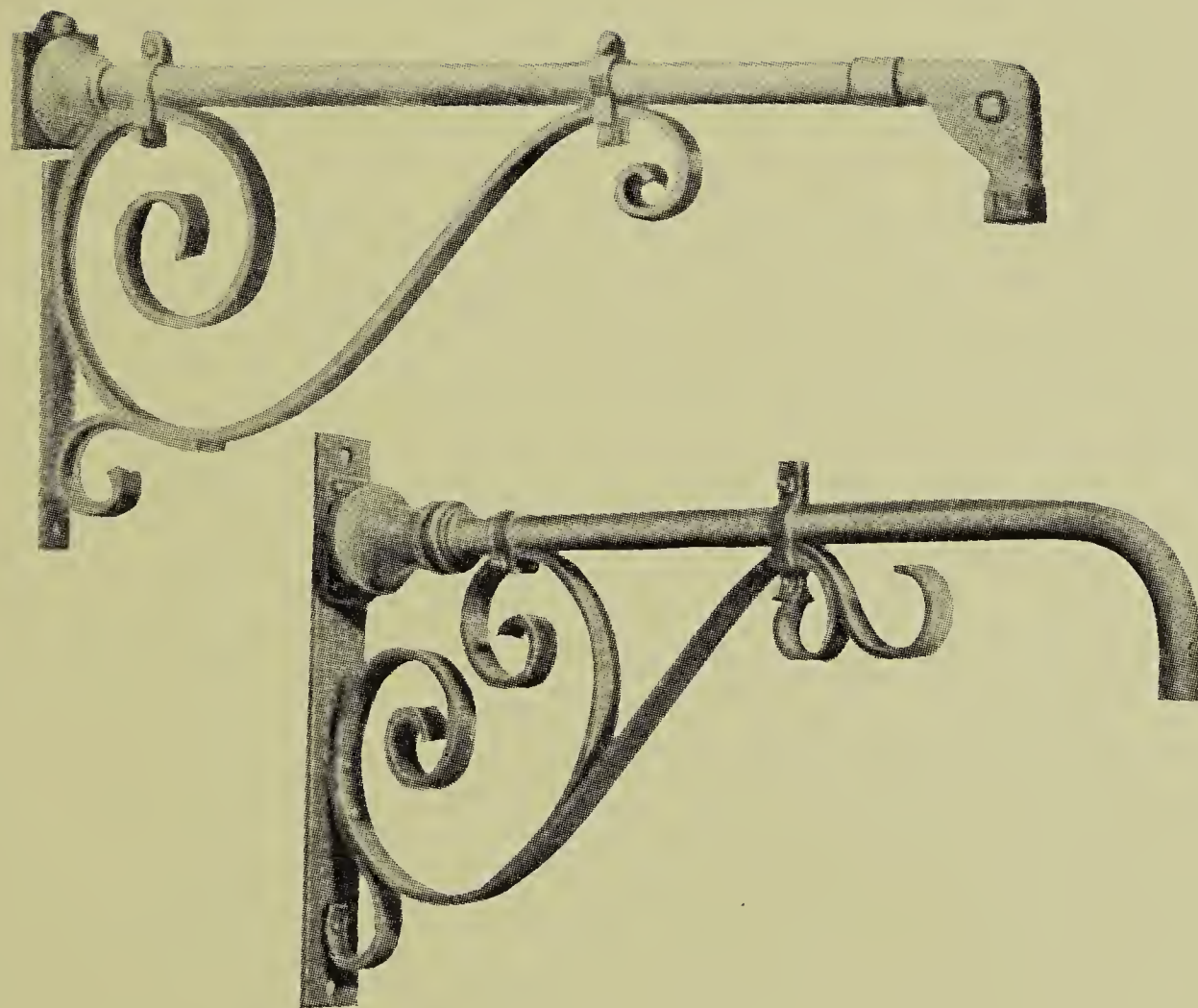


Grills, Panels and Lamp
Standards in Wrought
and Cast Iron, Brass
and Bronze

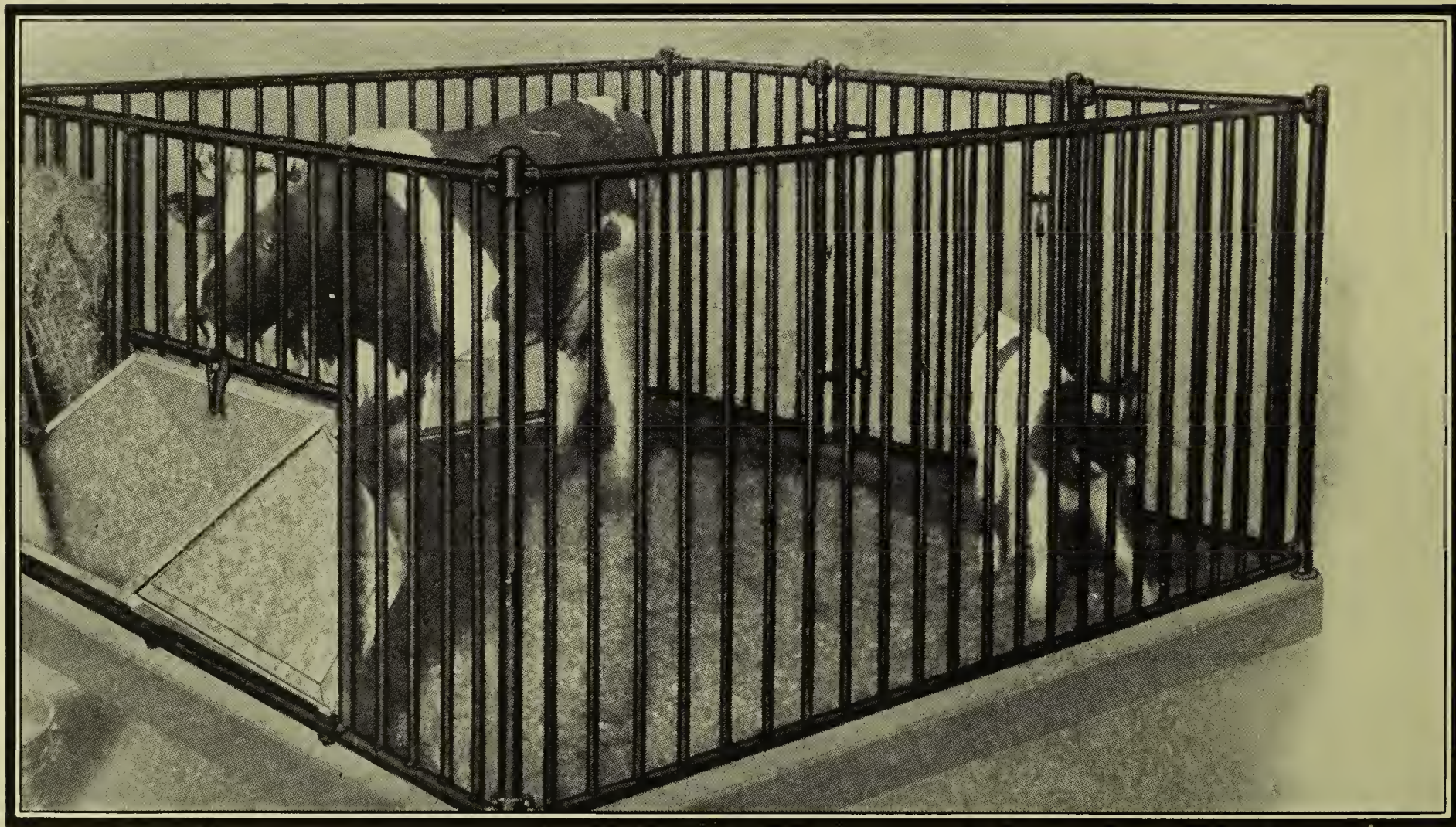




Lamp brackets for suburban lighting made of pipe with channel scroll to fasten to trolley or light wire poles.



Brackets similar to ones on opposite page, a little more elaborate; these have been used in town for moving-picture houses and other purposes.



Cow, Calf and Bull Pens. We make these any size and from several different designs

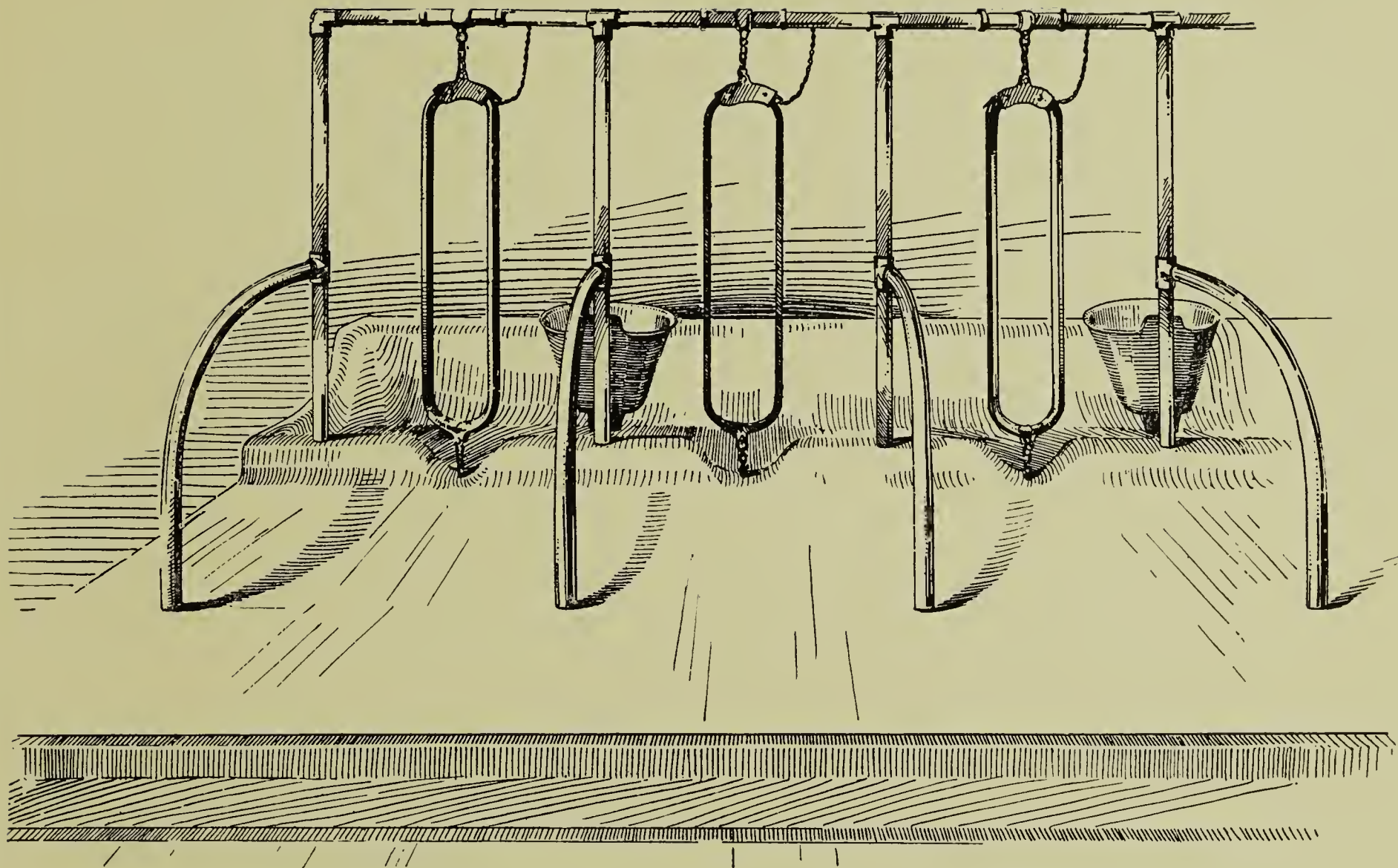


PLATE A—Pipe Framing for Cow Stalls. The plainest style we make. All material painted shop coat or galvanized, as required

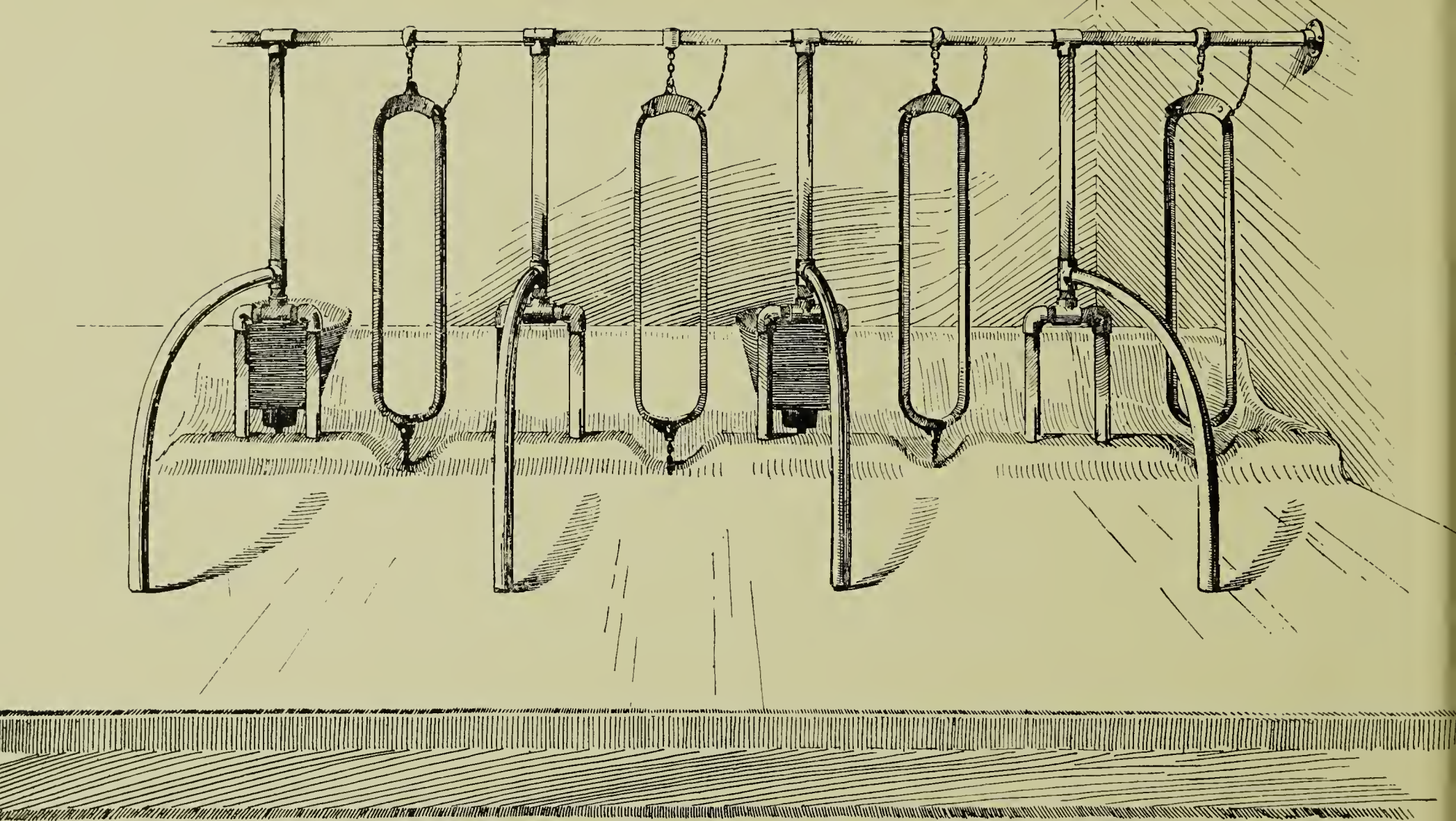


PLATE B—Cow Stall Framing similar to Plate A, except bottom of Posts, which are made double to give better footing in floor

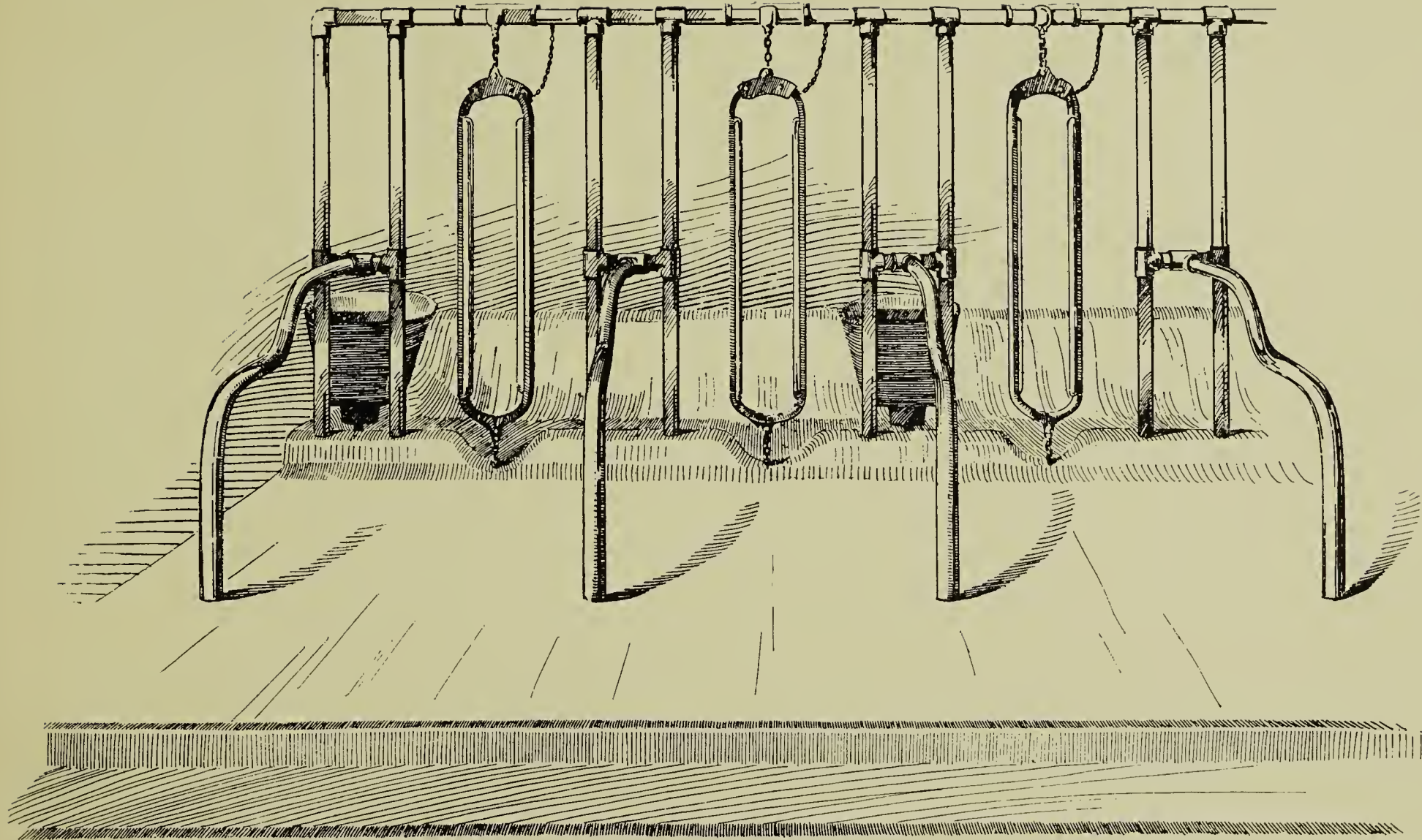


PLATE C—This Stall has two Posts running all the way to Top Rail, and Partition Piece has Offset Bend, which is more convenient in milking

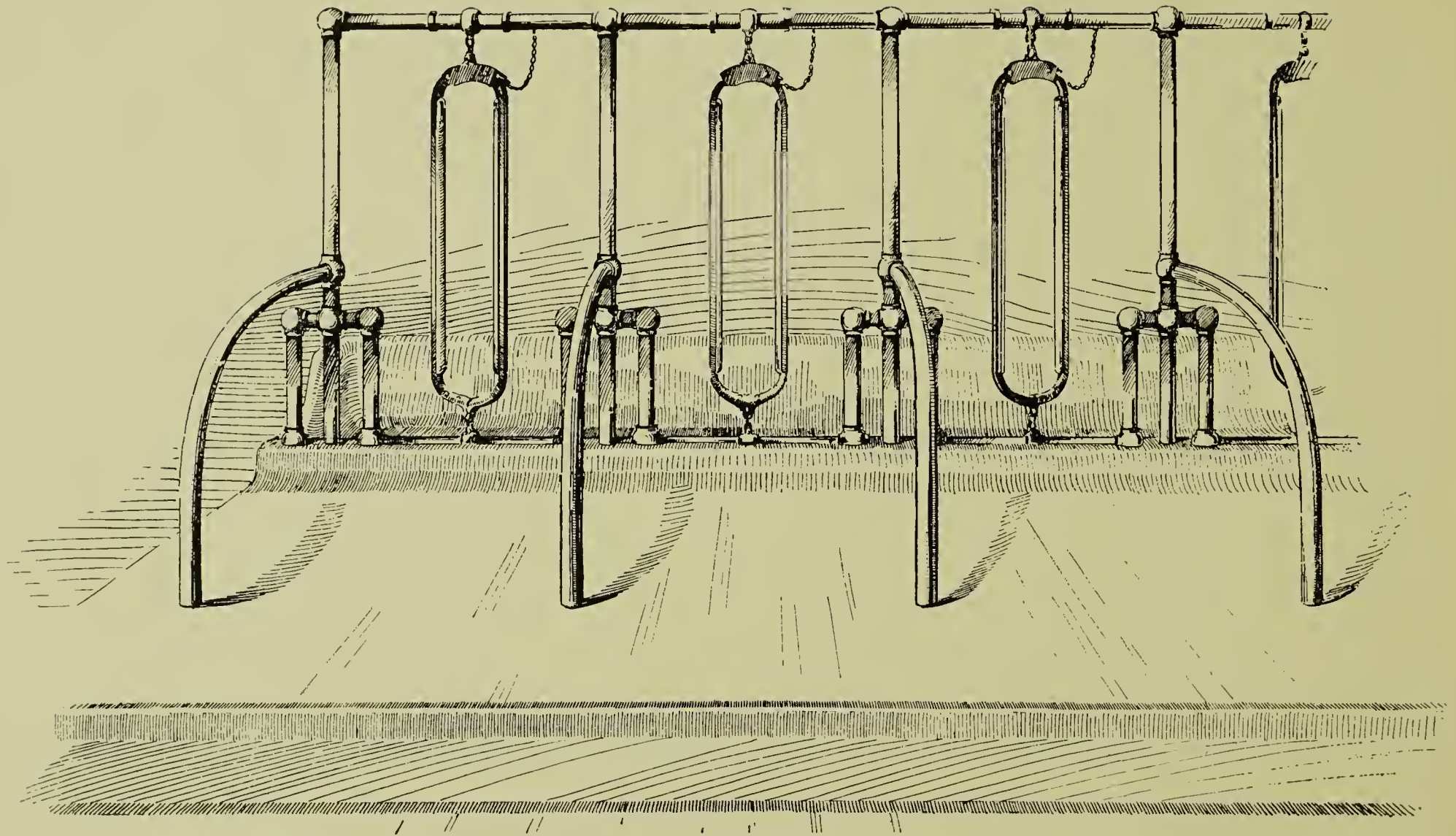


PLATE D—Similar to Plate B, except shown with Ball Rail Fittings, and has bottom Connecting Pipe to hold Stanchion. Made up painted shop coat or galvanized, and with either Ball or Plain Pattern Fittings

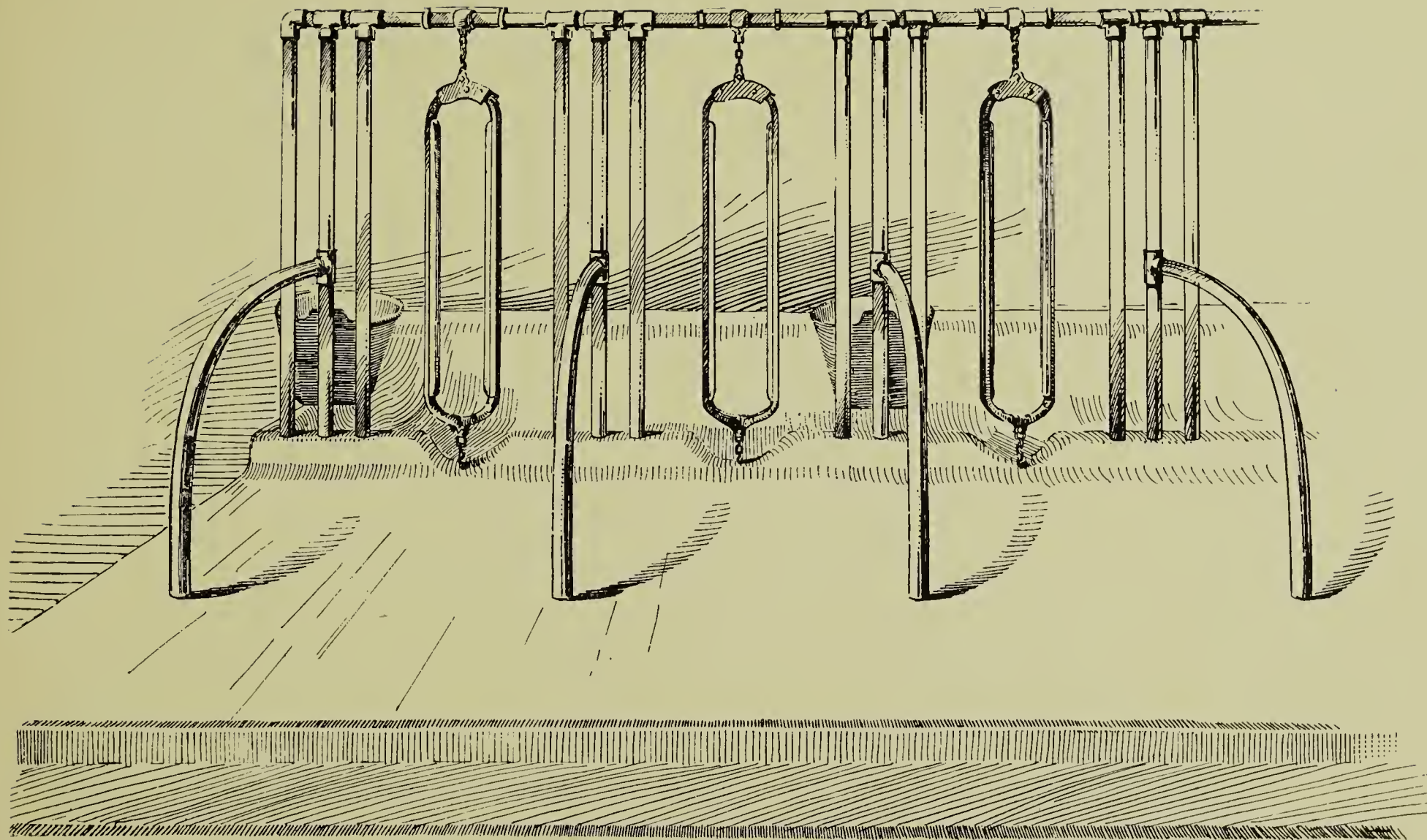
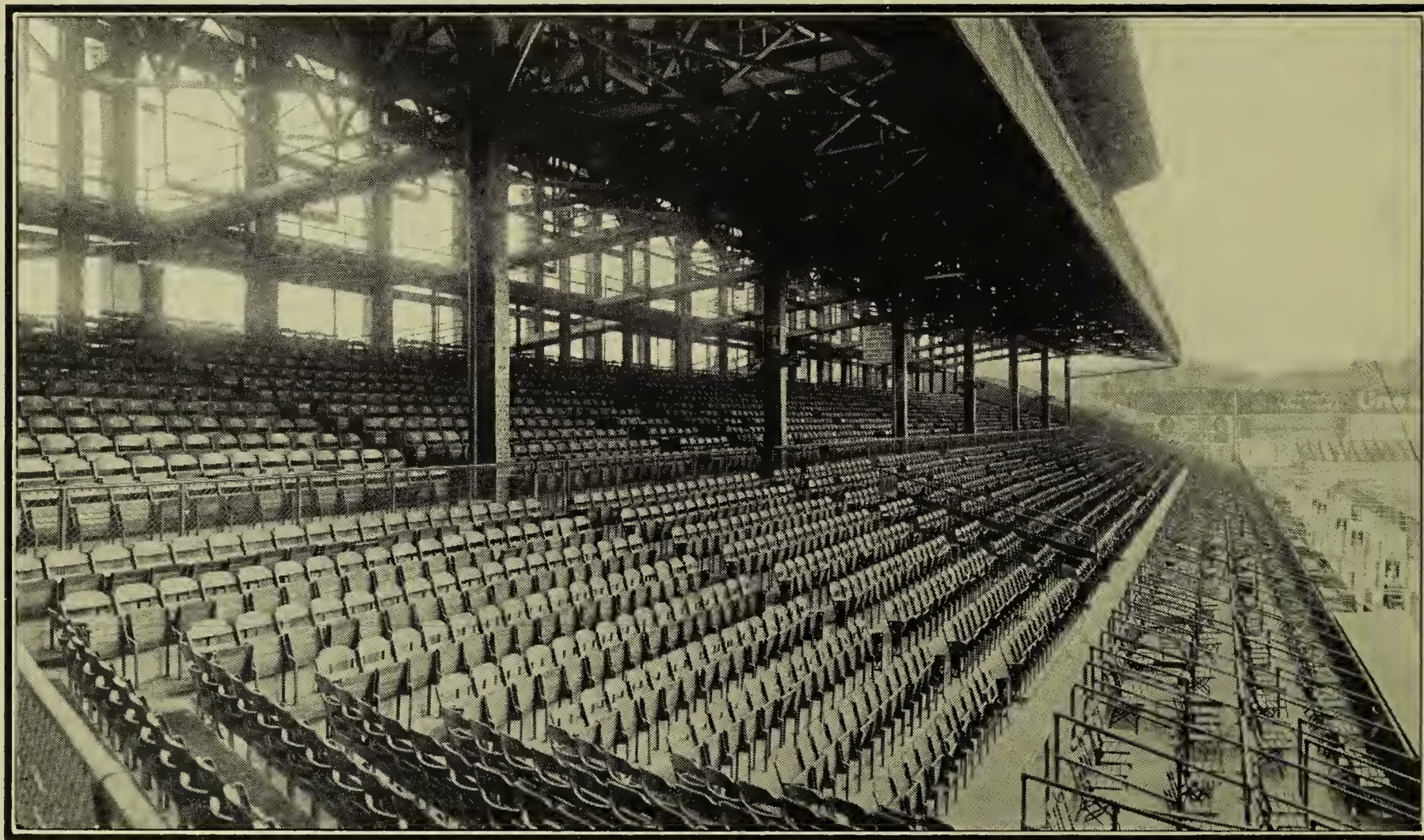
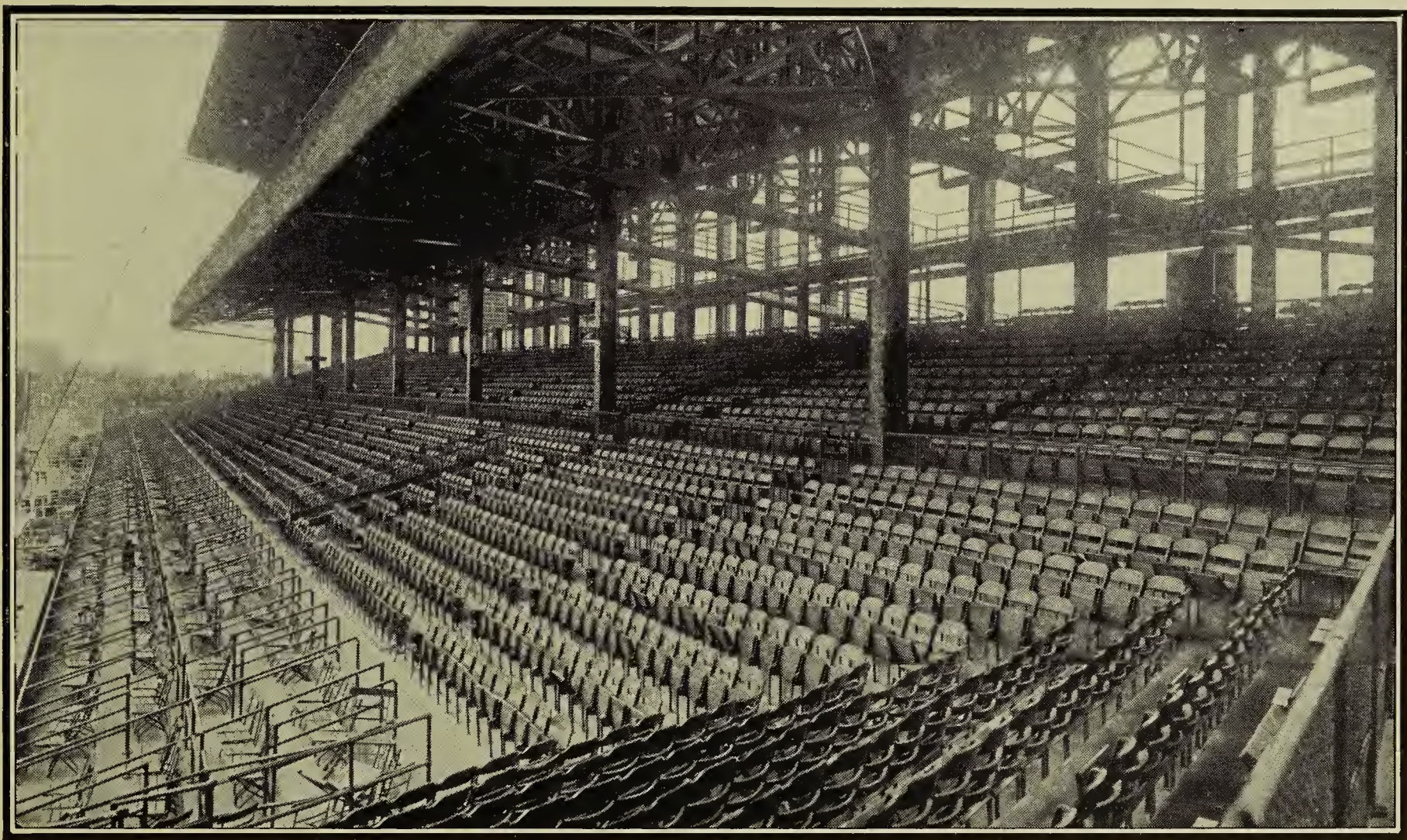


PLATE E—Illustrating Stalls with three Uprights, making a very strong frame. We do not supply Stanchions, as they can be bought separately



West Pavilion

Grand Stand at Ebbett's Field, for which



East Pavilion

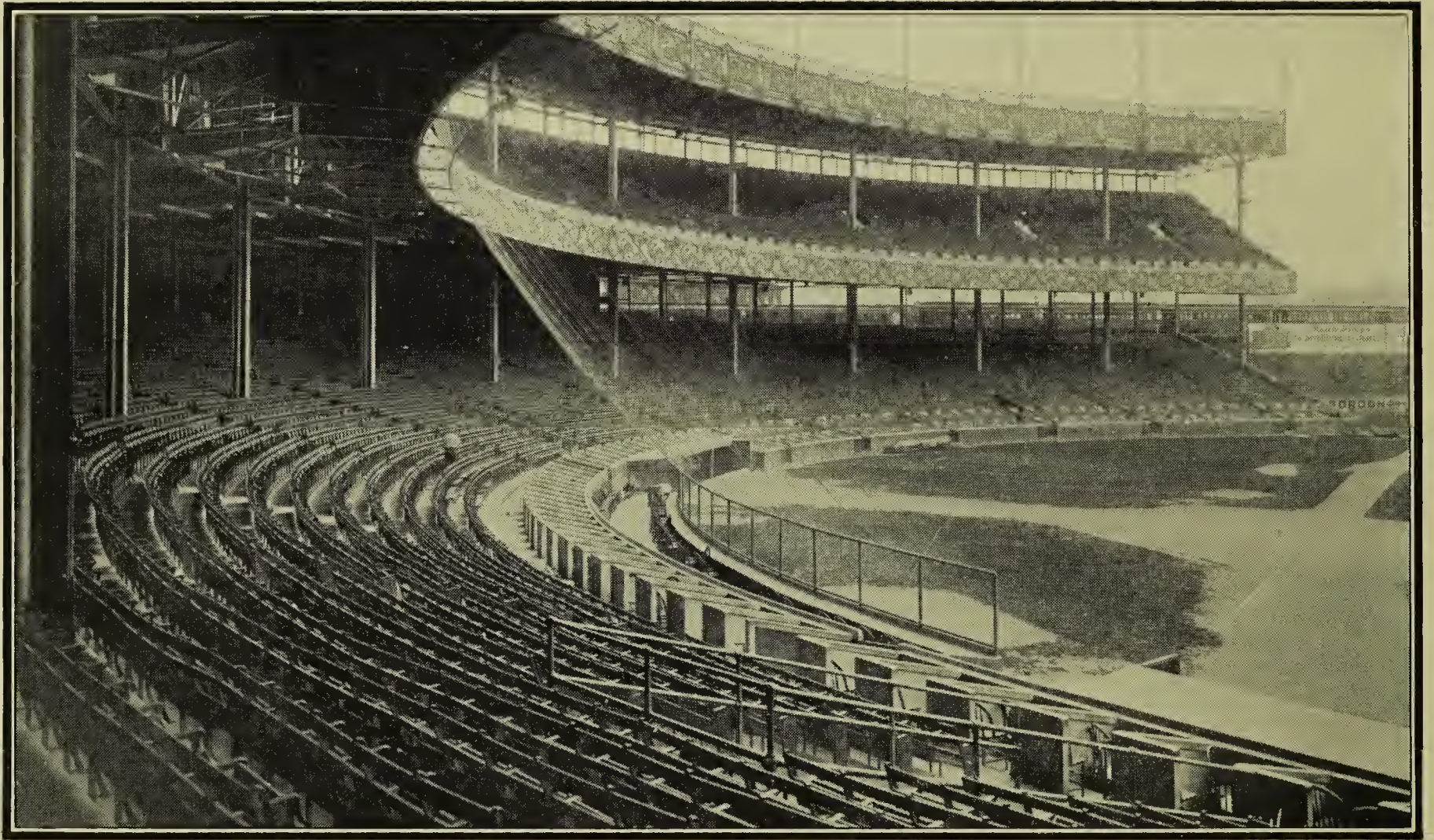
we supplied All the Railings, Gates, etc.



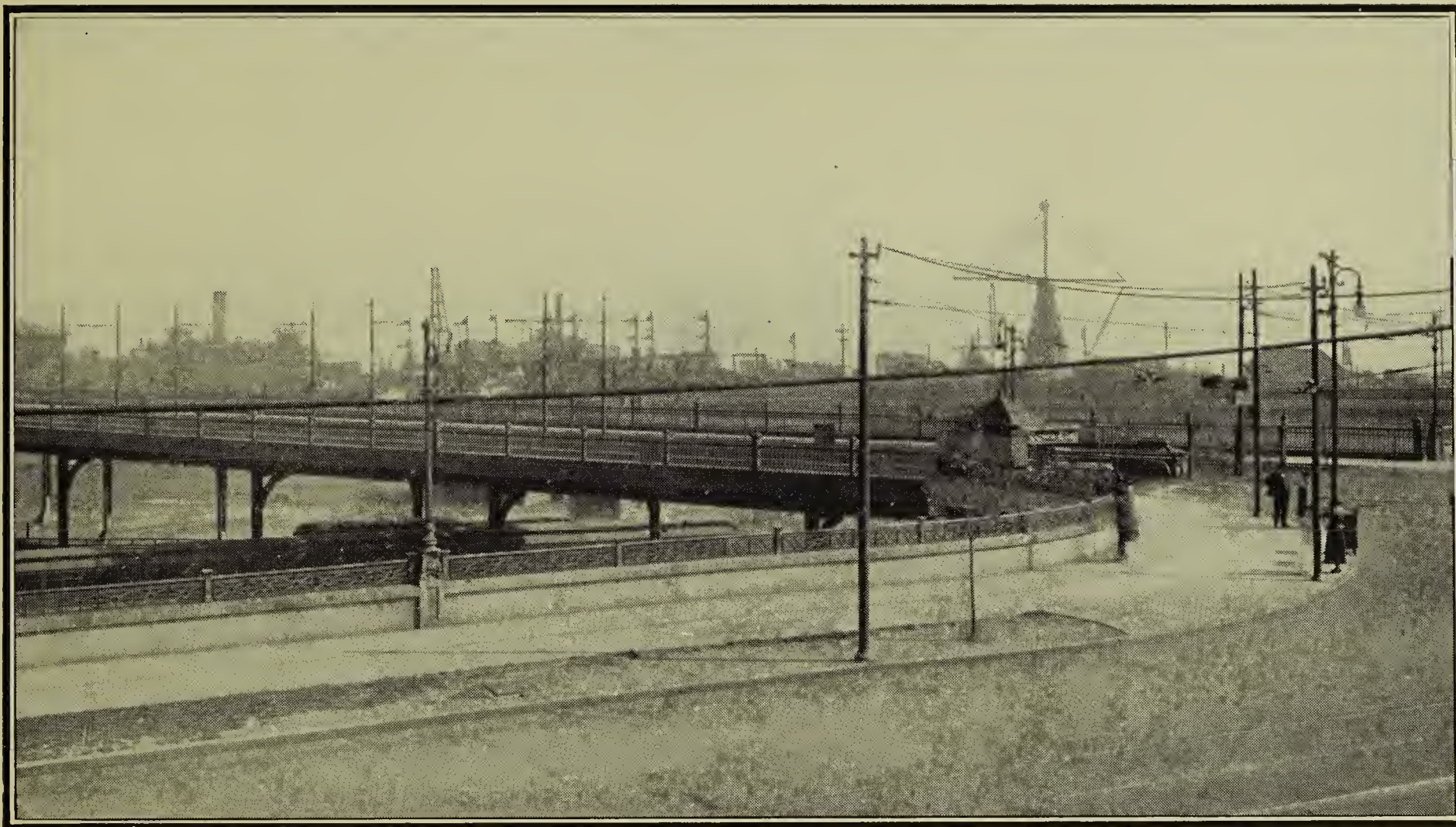
Front View of Grand Stand, 1



tt's Field, Brooklyn, N. Y.



Grand Stand at Polo Grounds, New York, for which we supplied the Pipe Railings



This is a very neat Railing, a combination of Bronze and Iron. We erected several thousand feet of it on stone parapet at St. George, Staten Island, N. Y.



Rails around Boxes in Grand Stand, Braves' Field, Boston

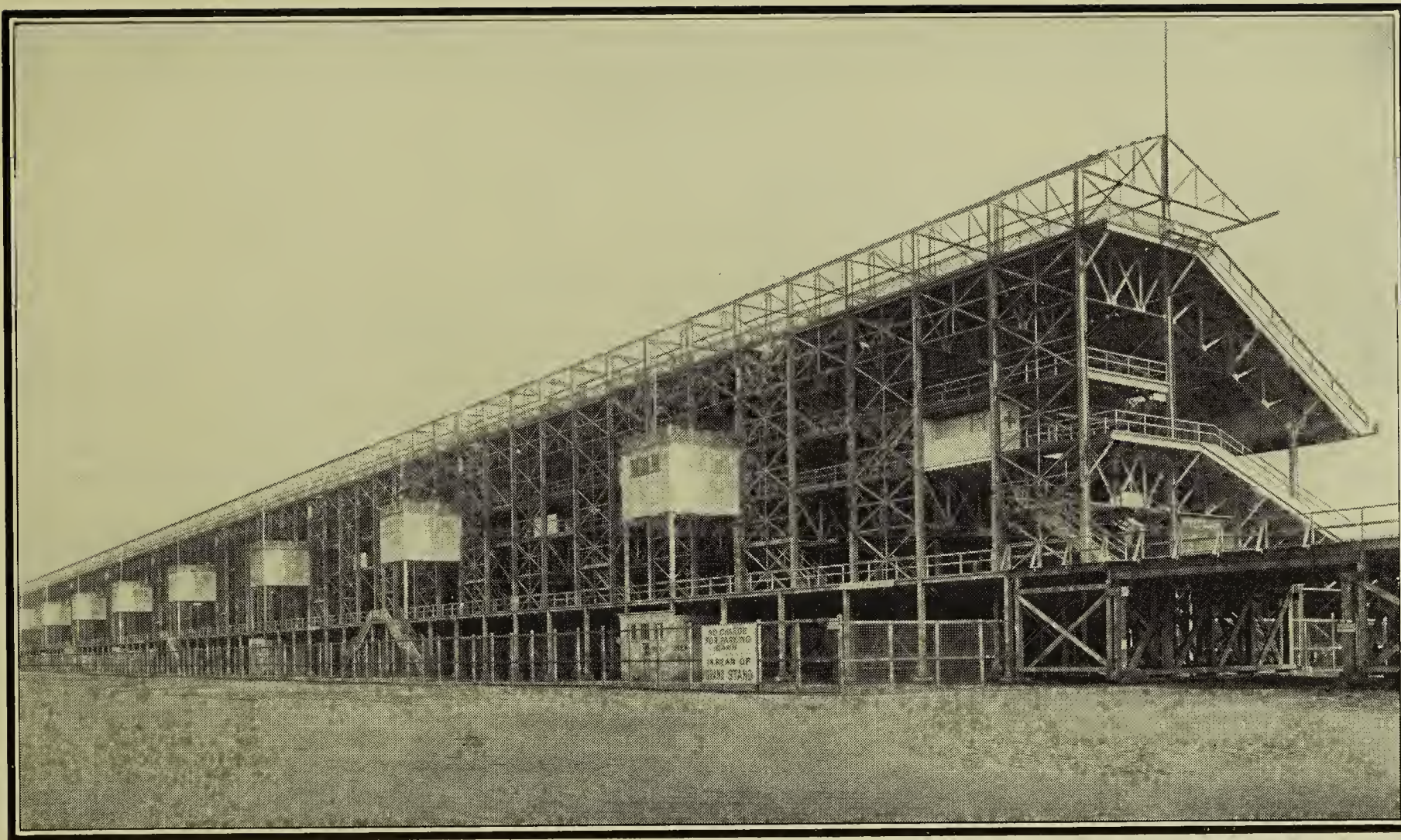


ass. We constructed All the Railing in This Stand



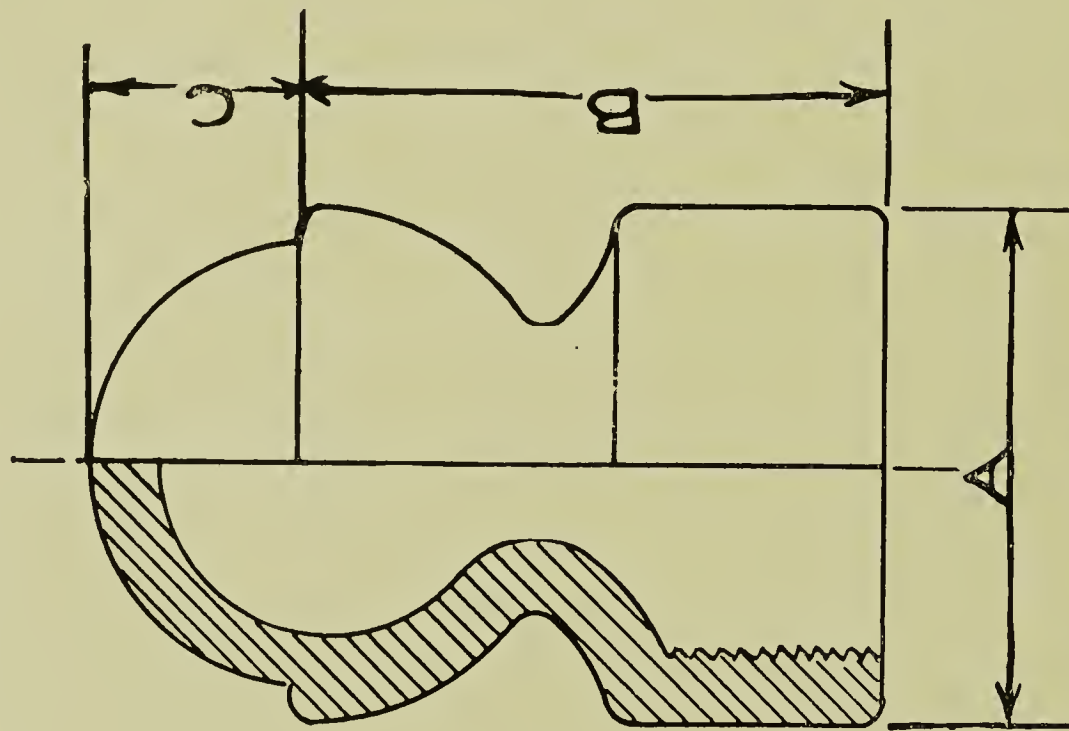
Front View

Grand Stand at Sheepshead Bay Motor Speedway, with 30,000 Feet of Pipe



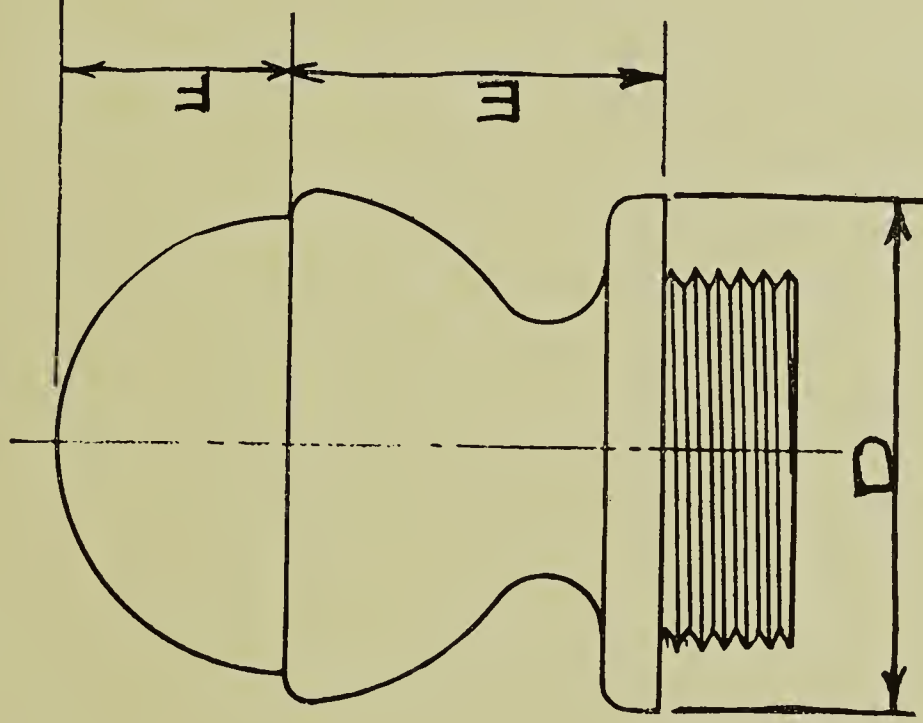
Rear View

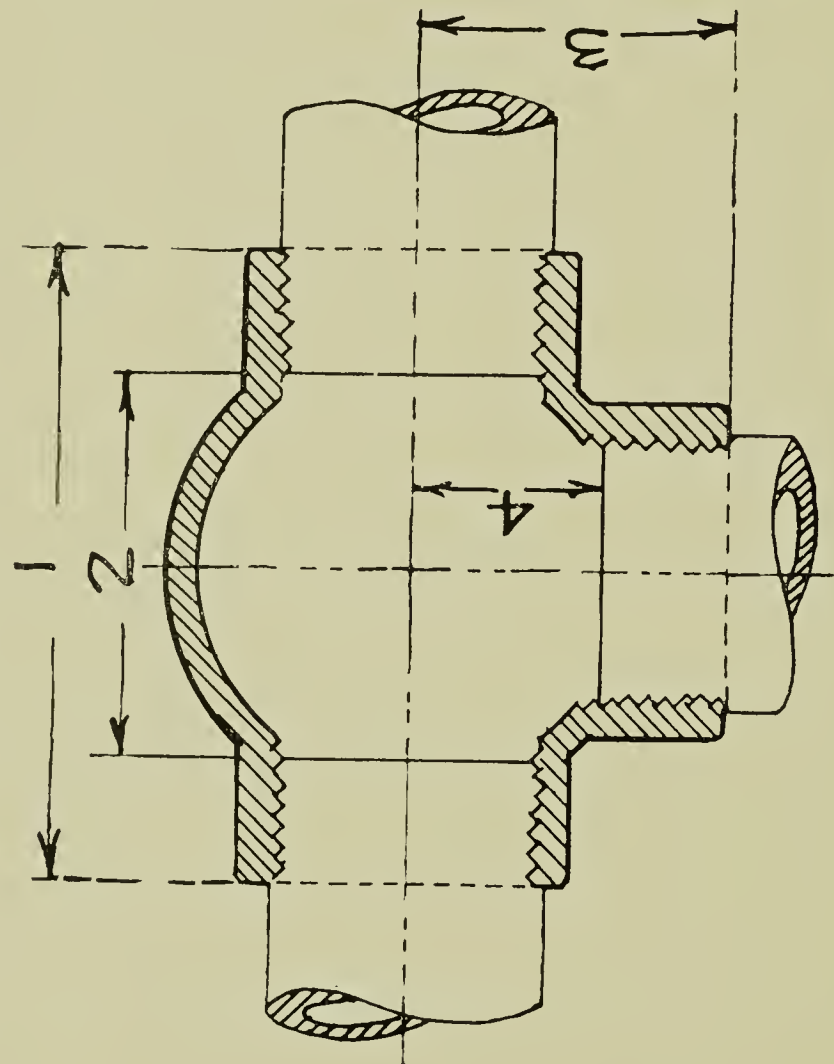
and Ornamental Railings, which we fabricated, and erected in Thirty-Two Days



FEMALE - ACORN				
SIZE	A	B	C	W
1/2"	1 1/2	1 7/8	7/8	
3/4"	1 7/8	2 1/8	7/8	
1"	2 3/8	2 3/8	1	
1 1/4"	2 5/8	2 5/8	1 1/8	
1 1/2"	3 1/4	3 1/8	1 1/2	
2"	3 3/4	3 1/2	1 3/4	
2 1/2"				

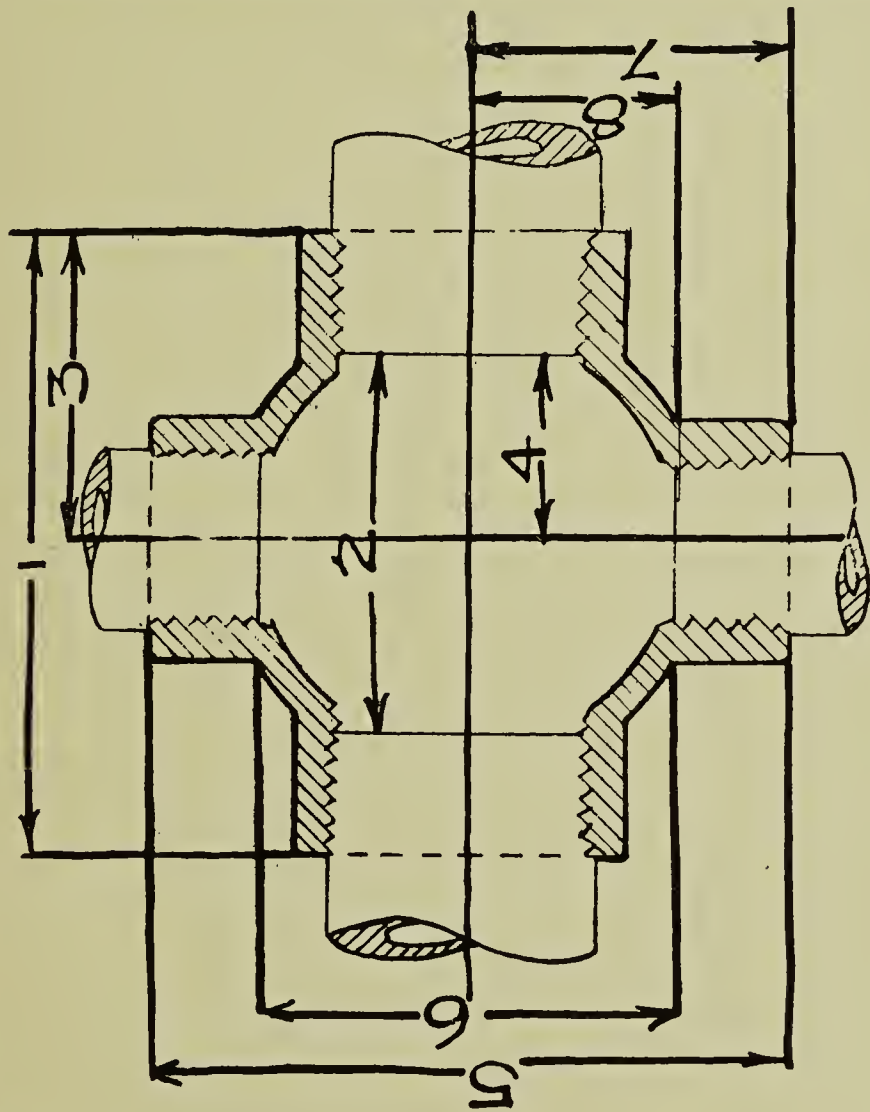
MALE-ACORN				
SIZE	D	E	F	W
1/2"	1 3/8	1 1/8	5/8	
3/4"	1 5/8	1 1/8	3/4	
1"	1 7/8	1 3/8	3/4	
1 1/4"	2 1/8	1 5/8	1	
1 1/2"	2 1/2	1 7/8	1 1/8	
2"	3	2 1/4	1 3/8	
2 1/2"	3 7/8	2 5/8	1 5/8	
3"	4 3/8	2 5/8	2	





RAIL-FITTINGS

SIZE	1	2	3	4	W
$\frac{1}{2}$	$2\frac{1}{4}$	$1\frac{1}{4}$	$1\frac{1}{8}$	$\frac{5}{8}$	
$\frac{3}{4}$	$2\frac{5}{8}$	$1\frac{5}{8}$	$1\frac{5}{16}$	$1\frac{13}{16}$	
1	$2\frac{13}{16}$	$1\frac{3}{4}$	$1\frac{13}{32}$	$\frac{7}{8}$	
$1\frac{1}{4}$	$3\frac{3}{8}$	$2\frac{1}{8}$	$1\frac{11}{16}$	$1\frac{1}{4}$	
$1\frac{1}{2}$	$3\frac{3}{4}$	$2\frac{1}{2}$	$1\frac{7}{8}$	$1\frac{1}{4}$	
2	$4\frac{3}{8}$	$2\frac{7}{8}$	$2\frac{3}{16}$	$1\frac{7}{16}$	
$2\frac{1}{2}$	$5\frac{15}{16}$	4	$2\frac{31}{32}$	2	
3	7	5	$3\frac{1}{2}$	$2\frac{1}{2}$	

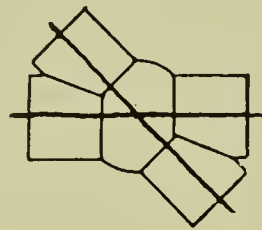


REDUCING-RAIL-FITTINGS

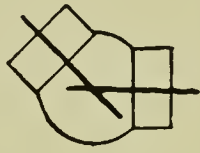
SIZE	5	6	7	8	W.
1/4x1	3 3/8	2 3/8	1 11/16	1 3/16	
1/2x1	3 13/16	2 7/8	1 29/32	1 7/16	
1/2x1 1/4	3 3/4	2 1/2	1 29/32	1 1/4	
2x1 1/4	4 13/16	3 5/8	2 13/32	1 13/16	
2x1 1/2	4 13/16	3 5/8	2 13/32	1 13/16	
2 1/2x1 1/2	6 1/8	4 7/8	3 1/16	2 7/16	
2 1/2x2	6	4 1/2	3	2 1/4	
3x2	7 1/8	5 5/8	3 9/16	2 7/8	
3x2 1/2	7	5	3 1/2	2 1/2	



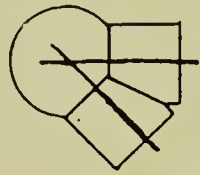
TEE



CROSS



LOWER-ELL



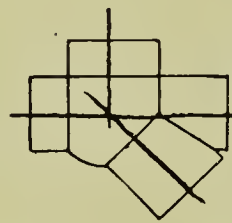
UPPER-ELL



B-O-LOWER



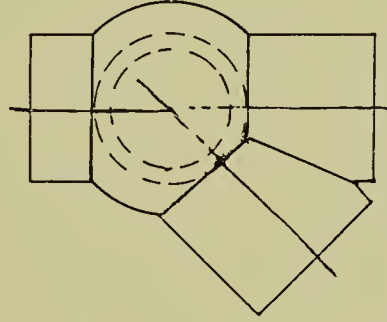
B-O-UPPER



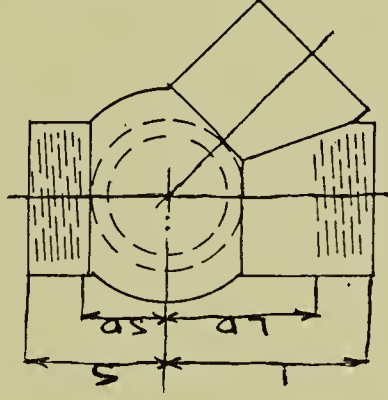
B-O-TEE

ANGLE-FITTINGS									
ANGLE	2" FITT.			1 1/2" FITT.			1 1/4" FITT.		
	L	LD	SD	L	LD	SD	L	LD	SD
A	3 3/4	2 3/4	2 1/6	3 1/6	2 1/6	1 7/8	1 1/4	2 9/16	1 11/16
B	3 1/2	2 3/4	2 1/6	2 7/8	2 1/4	1 7/8	1 1/4	2 5/8	1 11/16
C	3 5/8	2 5/8	2 1/6	2 3/4	2 1/8	1 7/8	1 1/4	2 1/2	1 11/16
D	3 1/4	2 1/2	2 1/6	2 3/8	2	1 7/8	1 1/4	2 3/8	1 11/16
E	3 5/8	2 3/8	2 1/6	1 7/8	1 7/8	1 7/8	1 1/4	2 1/4	1 11/16
F	2 13/16	2 1/6	2 3/16	1 3/4	1 7/8	1 7/8	1 1/4	2 3/16	1 11/16

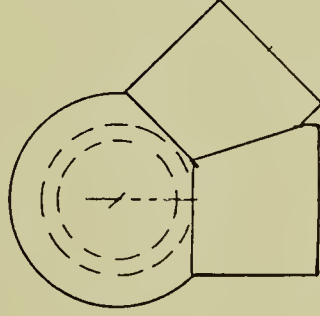
45°
41 3/4°
38 1/2°
35 1/4°
32°
29°



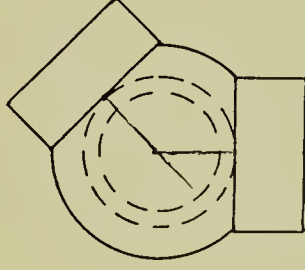
L-H. S-O.TEE



R-H. S-O.TEE



S-O.UPPER-ELL



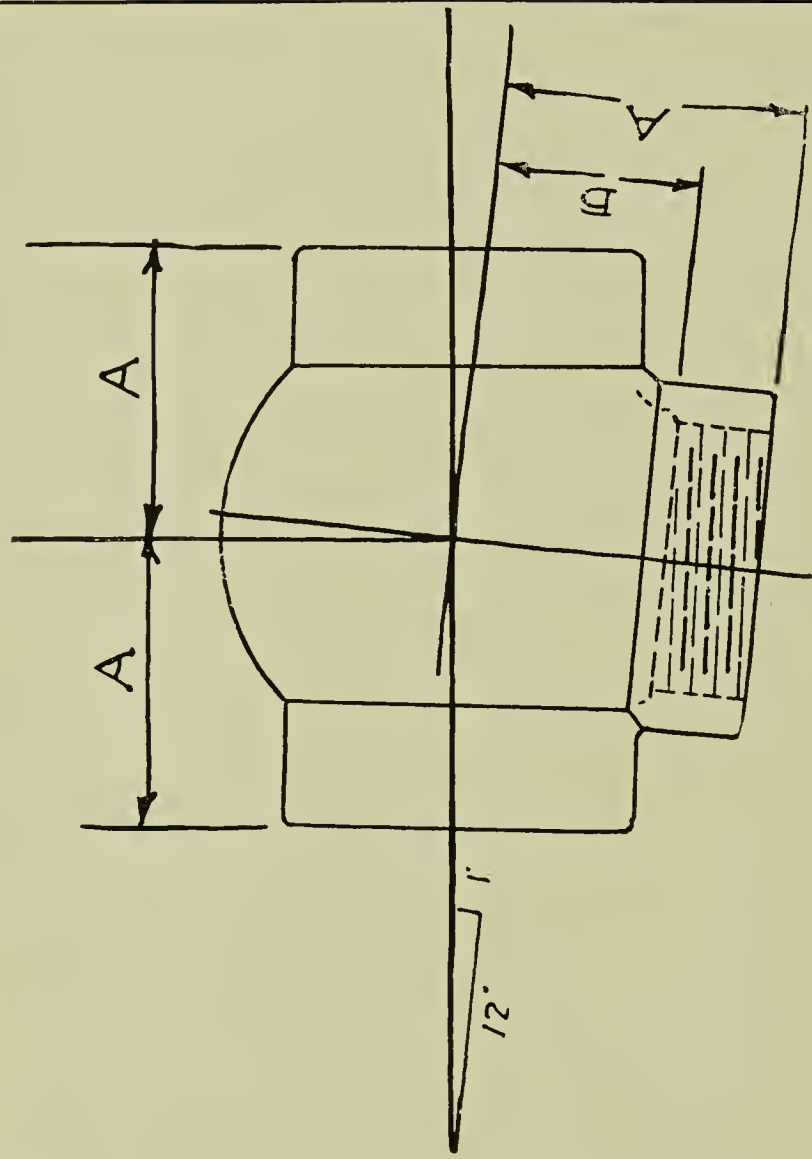
S-O.LOWER-ELL

S-O-ANGLE-FITTINGS

ANGLE	2" FITT.				1 1/2" FITT.				1 1/4" FITT.			
	L	LD	S	SD	L	LD	S	SD	L	LD	S	SD
B	3 1/2	2 3/4	2 3/16	1 7/16	2 7/8	2 1/4	1 7/8	1 1/4	2 5/8	2	1 1/16	1 1/16
E	3 1/8	2 3/8	2 3/16	1 1/16	2 1/2	1 1/2	1 1/8	1 1/4	2 1/4	1 5/8	1 1/16	1 1/16

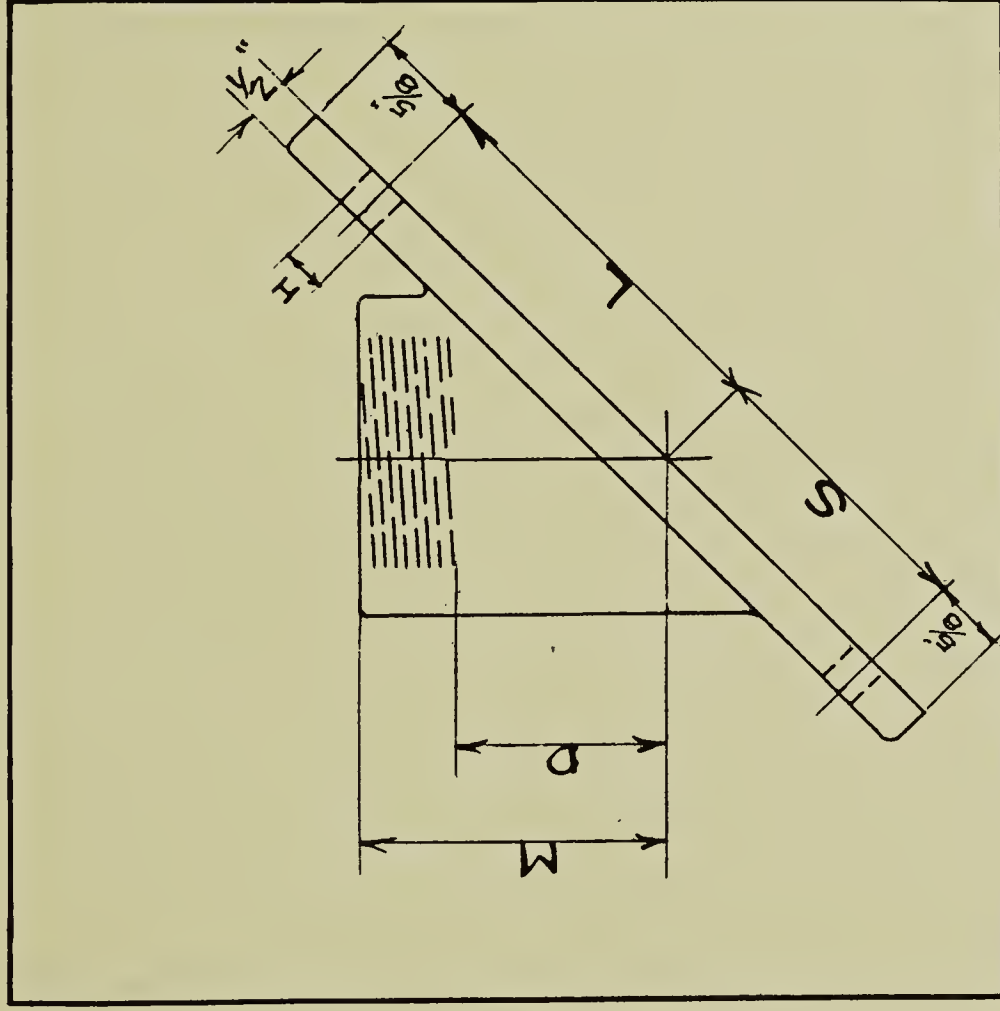
45° to 37°

37° to 25°



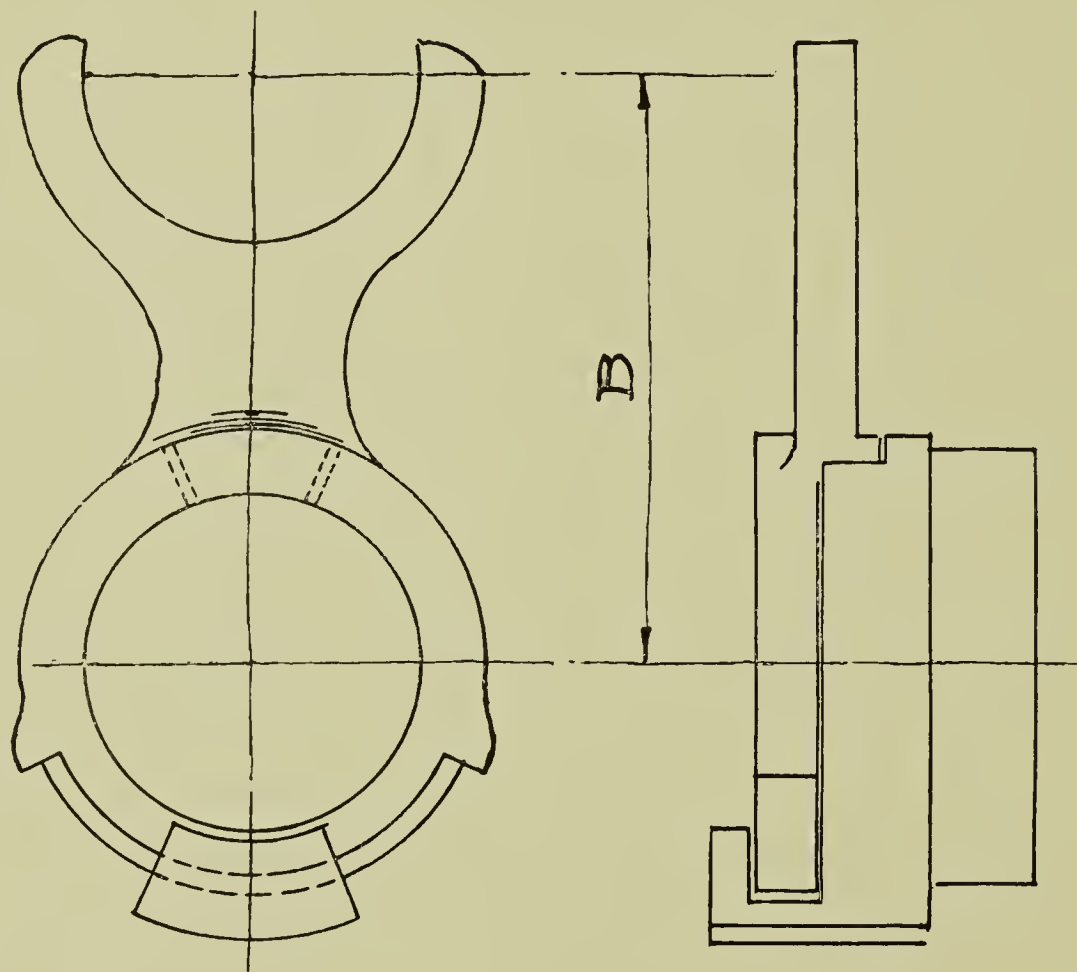
ANGLE-L-FITTING-			
SIZE	A	B	W
$\frac{1}{4}$	$\frac{11}{16}$	$\frac{11}{16}$	
$\frac{1}{2}$	$\frac{1}{8}$	$\frac{1}{4}$	
2	$2\frac{3}{16}$	$\frac{7}{16}$	

TEES & CROSSES ONLY

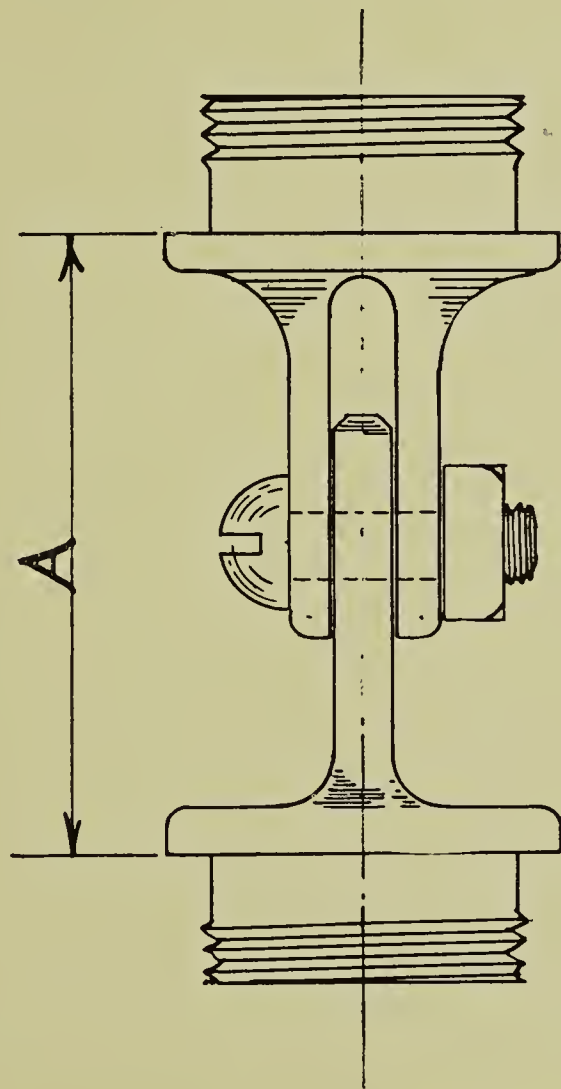


ANGLE- FLANGES

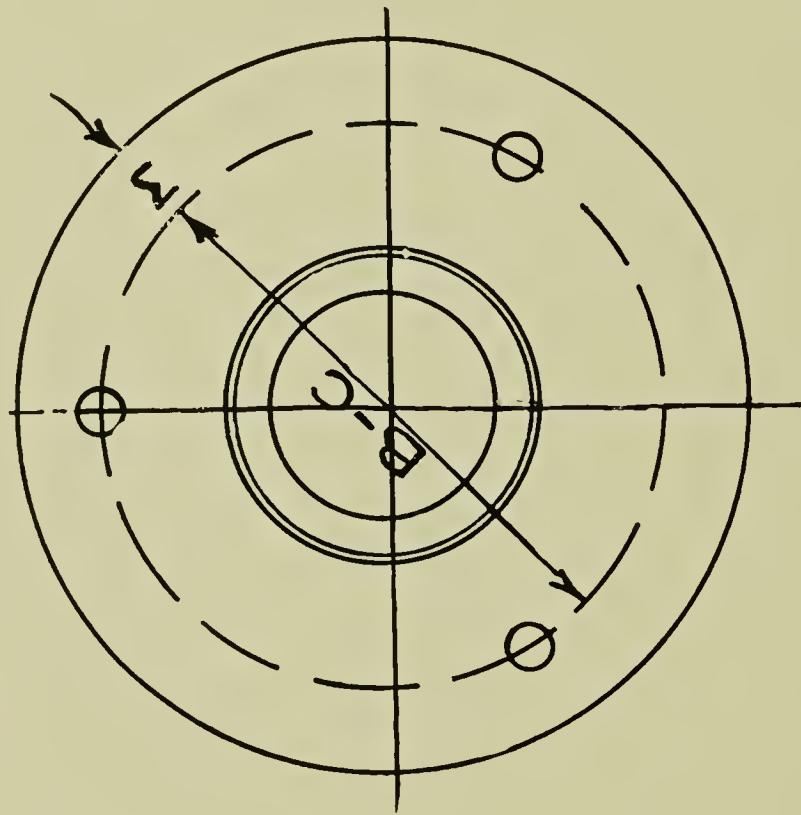
ANGLE	2" FLANGE	1 1/2" FLANGE	1 1/4" FLANGE	1" FLANGE	1" FLANGE	1" FLANGE
	M D S L H	M D S L H	M D S L H	M D S L H	M D S L H	M D S L H
45°	2 13/16	2 1/8	2 3/8	2 1/4	2 1/2	2 1/4
41 1/4°	2 1/4	2 1/8	2 3/8	2 1/4	2 1/2	2 1/4
38 1/2°	2 1/4	2 1/8	2 3/8	2 1/4	2 1/2	2 1/4
35 1/4°	2 1/4	2 1/8	2 3/8	2 1/4	2 1/2	2 1/4
32°	2 1/4	2 1/8	2 3/8	2 1/4	2 1/2	2 1/4
29°	2 1/4	2 1/8	2 3/8	2 1/4	2 1/2	2 1/4



LATCH		
SIZE	B	W
1'	2½	
1¼	3½	
1½	3½	
2	4½	

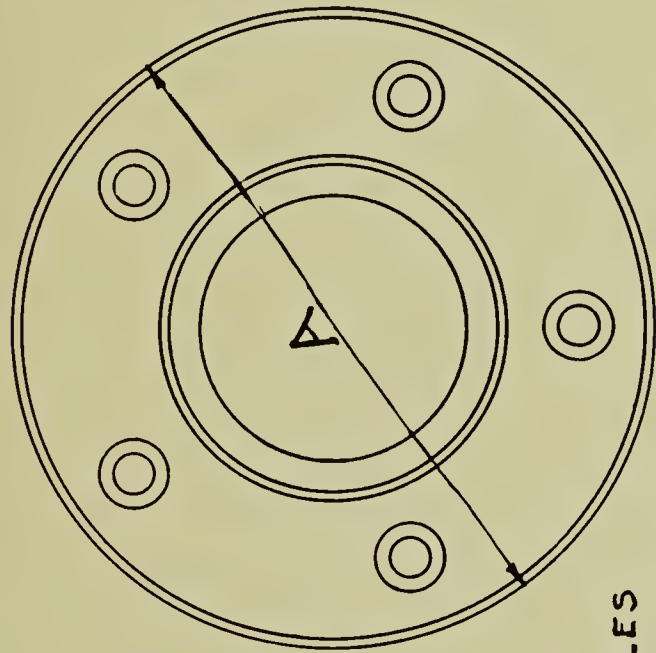


PLUG-HINGE			
SIZE	A	C-TO-C-OF RAIL-FITTINGS WITH-HINGE	W
$\frac{3}{4}$	$1\frac{15}{16}$	$4\frac{3}{4}$	
1	$2\frac{1}{2}$	$5\frac{1}{2}$	
$1\frac{1}{4}$	$2\frac{3}{4}$	$6\frac{1}{4}$	
$1\frac{1}{2}$	$2\frac{7}{8}$	$6\frac{3}{4}$	
2	$3\frac{1}{2}$	8	
$2\frac{1}{2}$			



BOLT HOLES CORED

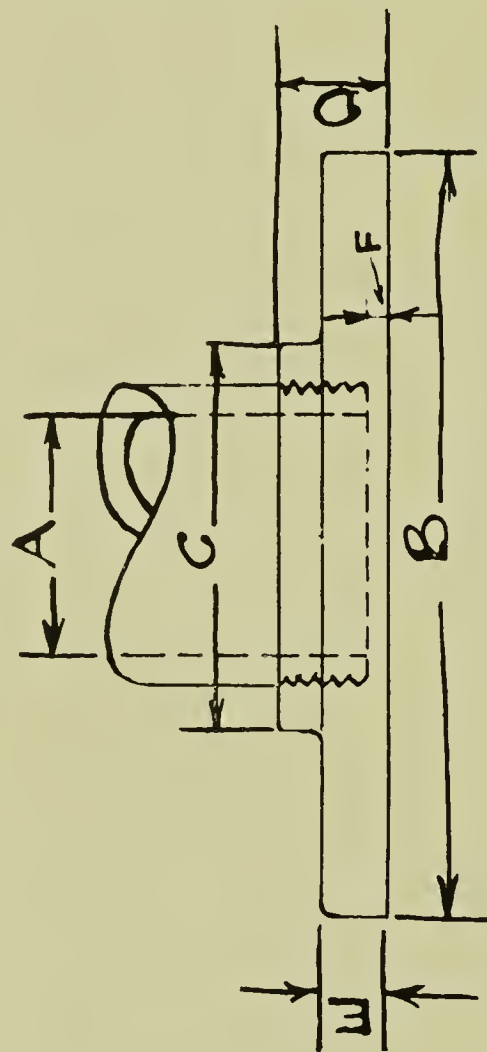
HY-RAIL-FLANGES					
SIZE	B-C.	HOLE	M	A	B
1/4 x 5 1/2	4 1/4	9/16	5/8	9/16	1/4
1/2 x 5 1/2	4 1/8	5/8	1 1/16	9/16	1/4
2 x 6	4 1/2	5/8	3/4	5/8	1/4
2 1/2 x 7	5 1/4	5/8	7/8	3/4	1/2
3 x 7 1/2	6	5/8	3/4	3/4	1/2



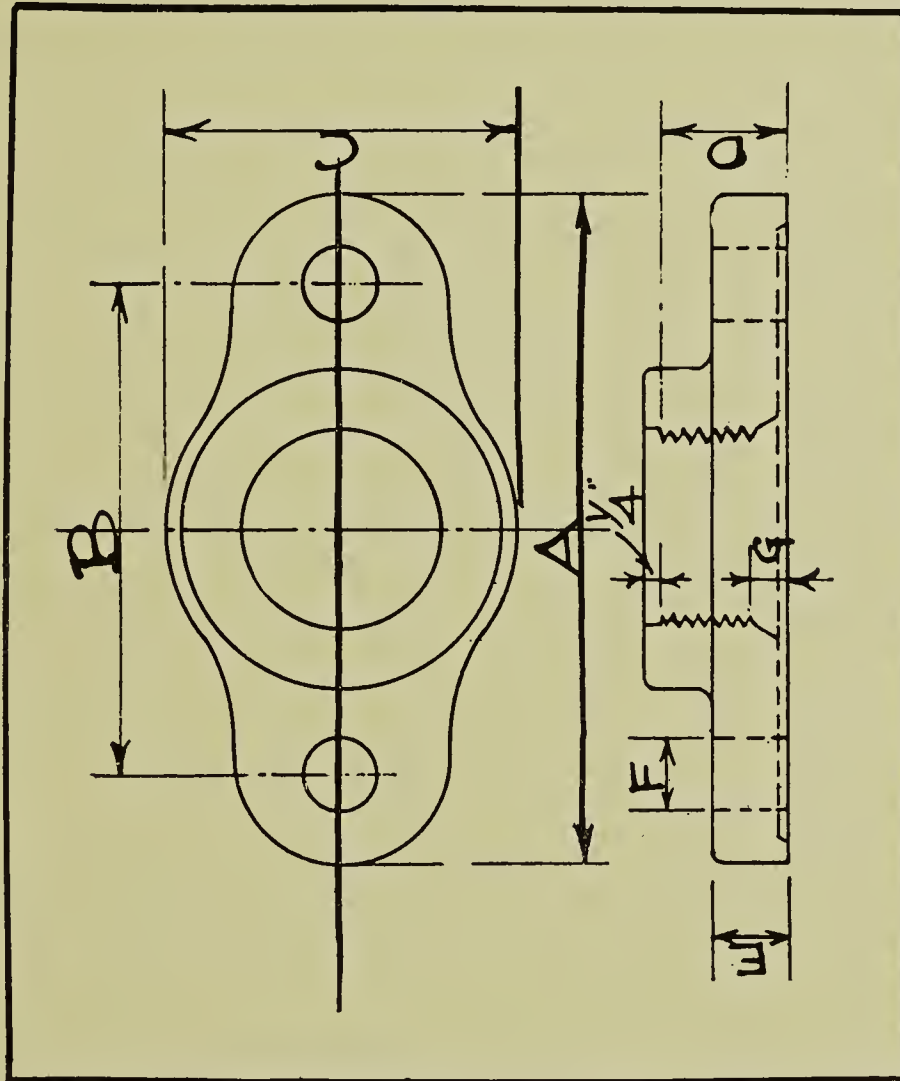
SCREW HOLES
CORED



LIGHT RAIL FLANGE					
SIZE	A	B	C	No. OF HOLES	HOLES C'SK.
1 1/2	3	4	11 1/16	4	4
3 4	4	4	3	4	5 1/16
1	4	4	7 8	4	5 1/16
1 1/4	4	4	7 8	4	5 1/16
1 1/4	5	5 1/16	1	5	5 1/16
1 1/2	4	5 1/16	1	4	5 1/16
1 1/2	5	5 1/16	1	5	5 1/16
2	6	3 8	1 8	6	5 1/16
2 1/2	6 1/2	3 8	1 8	6	5 1/16

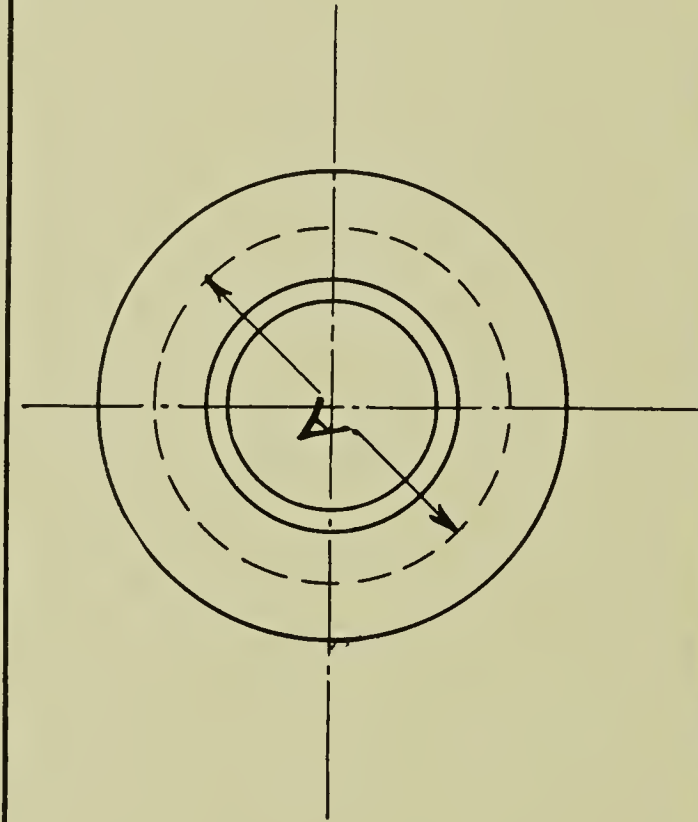


HEAVY-FLANGES						
A	B	C	D	E	F	W
1"	4	2	$\frac{13}{16}$	$\frac{3}{8}$	$\frac{5}{16}$	
1"	5	$2\frac{1}{8}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{4}$	
$\frac{1}{4}$ "	5	$2\frac{1}{4}$	$\frac{7}{8}$	$\frac{1}{2}$	$\frac{1}{4}$	
$\frac{1}{4}$ "	$5\frac{1}{2}$	$2\frac{1}{4}$	$\frac{15}{16}$	$\frac{1}{2}$	$\frac{5}{16}$	
$\frac{1}{4}$ "	6	$2\frac{1}{8}$	$\frac{13}{16}$	$\frac{1}{2}$	$\frac{3}{16}$	
$\frac{1}{2}$ "	5	$2\frac{5}{8}$	$\frac{7}{8}$	$\frac{1}{2}$	$\frac{1}{4}$	
$\frac{1}{2}$ "	$5\frac{1}{2}$	$2\frac{5}{8}$	$\frac{7}{8}$	$\frac{1}{2}$	$\frac{1}{4}$	
$\frac{1}{2}$ "	6	$2\frac{11}{16}$	$\frac{7}{8}$	$\frac{1}{2}$	$\frac{1}{4}$	
2	5	$3\frac{1}{16}$	$\frac{7}{8}$	$\frac{9}{16}$	$\frac{1}{8}$	
2	6	$3\frac{1}{16}$	1	$\frac{9}{16}$	$\frac{1}{4}$	
2	7	$3\frac{1}{8}$	$1\frac{1}{8}$	$\frac{3}{4}$	$\frac{3}{8}$	
$2\frac{1}{2}$	6	$3\frac{9}{16}$	$1\frac{3}{16}$	$\frac{9}{16}$	$\frac{3}{16}$	
$2\frac{1}{2}$	7	$3\frac{5}{8}$	$1\frac{1}{8}$	$\frac{11}{16}$	$\frac{1}{8}$	
3	$7\frac{1}{2}$	$4\frac{3}{16}$	$1\frac{5}{16}$	$\frac{3}{4}$	$\frac{5}{16}$	
3	8	$4\frac{1}{4}$	$1\frac{1}{4}$	$\frac{3}{4}$	$\frac{1}{4}$	
$3\frac{1}{2}$	$7\frac{1}{2}$	$4\frac{3}{4}$	$1\frac{1}{4}$	$\frac{13}{16}$	$\frac{1}{4}$	
$3\frac{1}{2}$	8	$4\frac{3}{4}$	$1\frac{3}{8}$	$\frac{11}{16}$	$\frac{3}{8}$	
$3\frac{1}{2}$	9	$4\frac{11}{16}$	$1\frac{1}{4}$	$\frac{13}{16}$	$\frac{1}{4}$	
4	8	$5\frac{5}{16}$	$1\frac{3}{8}$	$\frac{13}{16}$	$\frac{3}{8}$	
4	10	$5\frac{11}{16}$	$1\frac{3}{8}$	1	$\frac{3}{8}$	



OVAL-FLANGES

SIZE	A	B	C	D	E	F	G	W
1/2	4	2 13/16	1 3/4	3/4	3/8	7/16		
3/4	3 7/8	2 11/16	1 5/8	13/16	3/8	7/16		
1	4 3/16	3	2	13/16	1/2	7/16		
1 1/4	5	3 11/16	2 3/8	1	1/2	9/16		
1 1/2	5 1/8	3 1/8	2 5/8	7/8	1/2	9/16		
2	5 7/8	4 1/2	3 1/8	1	1/2	9/16		
2 1/2	6 1/8	5 3/8	4 1/4	1 1/4	5/8	1 1/16		
3	8 1/2	6 11/16	5 1/8	1 5/8	1 1/16	5/8		
1/4" RECESS-FOR-1'-1 1/4'-1 1/2'-2'-2 1/2" ONLY								



STANDARD BOLT - CIRCLE

SIZE	A	W	SIZE	A	W
1 x 4	3		2 1/2 x 7	5 3/8	
1 x 5	3 5/8		2 1/2 x 8	6	
1 1/4 x 5	3 3/4		3 x 7 1/2	6	
1 1/4 x 5 1/2	4		3 x 8	6 1/4	
1 1/4 x 6	4		3 1/2 x 7 1/2	6 1/4	
1 1/2 x 5	4		3 1/2 x 8	6 1/2	
1 1/2 x 5 1/2	4 1/8		3 1/2 x 9	7	
1 1/2 x 6	4 1/2		4 x 8	6 3/4	
2 x 5	4 1/8		4 x 9	7 1/2	
2 x 6	4 1/2		4 x 10	8	
2 x 7	5 1/8				



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